WATER SUPPLY OUTLOOK FOR MONTANA

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

AS OF
JUNE 1, 1976

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect an runoff. Early season forecasts are therefore subject to a greater change than those made an later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly ar semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of outomatic snow water equivalent and related dato sensing devices, along with radio telemetry are expanding and will provide a continuous recard of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published obout October 1 of each year.

COVER PHOTO: SURVEYOR ENROUTE TO THE MT. BALDY ARIZONA SNOW COURSE
SCS PHOTO AZ-5460

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snaw survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizana	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Raom 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P.O. Box 98, Bazeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for Califarnia by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resaurces, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

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WATER SUPPLY OUTLOOK FOR MONTANA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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MONTANA WATER SUPPLY OUTLOOK
June 1, 1976

Melting of the mountain snowpack is following a normal pattern. Snow in the Flathead River drainage and in the smaller mountain ranges of central Montana is a little below average. All other areas have average or a little above average snow remaining for this date.

Precipitation has generally been below average during the runoff period.

Most streams appear to have reached their snowmelt peak except the Gallatin River and the Yellowstone River and its main tributaries draining the Absarokee and Beartooth Mountains. Snow pillow data indicates the peak snowmelt runoff on the Gallatin River should occur the second week of June. The Yellowstone River and its tributaries should experience its peak snowmelt runoff data in the second week or during the third week in June.

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average +
COLUMBIA RIVER BASIN							
Kootenai							
Baree Trail	3800	48	7.5	6/01	6.3	6.2	6.1
Murphy Lake R. S.	3000	48	22.6	6/01	20.0	19.9	20.6
Raven	3050	48	23.0	6/01	14.3	14.8	17.0
Flathead							
Desert Mountain	5600	54	8.4	5/28	8.7	9.4	8.9
Marias Pass	5250	54	6.5	5/24	7.0	6.1	6.2
Clark Fork							
Black Pine	7100	48	10.0	5/26	8.6	9.4	8.7
Lubrecht Forest	4100	48	26.8	6/04	22.3	22.8	22.9
Seeley Lake R. S.	4030	48	11.9	6/06	11.0	11.3	10.9
Skalkaho Summit	7260	48	10.8	5/26	8.8	10.2	10.0
Bitterroot							
Gibbons Pass	7100	48	7.1				
Lolo Pass	5250	48	10.6	5/26	9.9	9.4	9.9
MISSOURI RIVER BASIN							
Beaverhead							
Lakeview	6700	48	15.3	6/01	14.9	17.0	15.1
Madison							
West Yellowstone	6700	48	6.5	6/04	2.6	3.3	3.1
Gallatin							
Bridger Bowl	7250	48	17.0	5/28	15.0	15.3	16.1
College Site No. 2	4856	54	17.7	5/28	15.9	16.8	14.2
Lick Creek	6860	48	18.8	5/27	14.4	15.8	17.6
Twenty-One Mile	7150	48	10.0	6/05	9.8	9.3	9.9
Missouri Main Stem							
Kings Hill	7420	48	11.8	5/28	11.0	9.1	10.7
Stemple Pass	6350	48	5.9	5/28	5.3	5.4	5.2
Milk							
Beaver Creek	3950	48	20.9	5/28	9.5	16.2	15.5
Rocky Boy	4700	36	10.1	5/28	8.5	10.0	9.8
Yellowstone							
Battle Ridge	6020	48	17.6	5/28	13.3	14.0	14.8
Northeast Entrance	7350	48	9.4	6/01	8.7	10.8	9.4
PMC Dryland	3700	48	20.7	6/01	5.2	11.4	11.4

+ Average for period of record.

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average
COLUMBIA RIVER BASIN					
Kootenai	Koocanusa	5,694.0	3,430.0	1,566.0	-
Flathead	Hungry Horse	3,428.0	2,940.0	2,111.0	2,639.0
	Flathead Lake	1,791.0	1,444.0	1,245.0	1,481.0
	Camas (4)	45.2	26.8	27.8	36.3
	Mission Valley (8)	100.3	81.1	47.0	63.7
Clark Fork	Georgetown Lake	31.0	27.8	24.0	25.6
	Lower Willow Creek	4.9	4.9	4.9	4.1
	Nevada Creek	13.6	12.8	-	12.1
	Noxon Rapids	334.6	322.6	251.2	243.9
Bitterroot	Como	34.9	-	-	29.1
	Painted Rocks	31.7	33.5	13.1	32.4
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	328.9	220.1	183.2	149.5
	Lima	84.0	80.4	67.6	60.2
Ruby	Ruby	38.8		-	37.7
Madison	Hebgen Lake	377.5	265.0	234.4	287.1
	Ennis Lake	41.0	35.0	34.4	36.9
Gallatin	Middle Creek	8.0	6.3	3.4	7.0
Missouri	Canyon Ferry	2,043.0	1,747.0	1,520.0	1,652.0
	Hauser & Helena	61.9	62.5	61.9	57.9
	Lake Helena	10.4	10.7	10.4	9.1
	Holter Lake	81.9	81.4	79.7	78.6
	Smith River	10.6	-	11.5	10.8
	Bair	7.0	-	7.0	6.7
	Martinsdale	23.1	-	18.7	16.6
	Deadman's Basin	72.2	-	-	57.0
	Fort Peck Lake	19,140.0	18,340.0	17,980.0	13,920.0
Sun	Gibson	99.0	85.2	92.0	92.8
	Willow Creek	32.2	28.1	29.6	29.6
	Pishkun	32.0	30.0	31.7	28.8
Marias	Lower Two Medicine	11.9	-	-	-
	Four Horns	19.2	-	-	-
	Swift	30.0	29.4	19.3	27.7
	Lake Frances	111.9	100.0	80.8	94.6
	Tiber	1,347.0	627.7	628.1	691.1
Milk	Beaver Creek	3.5	2.5	3.5	-
	Fresno	127.2	97.0	125.2	102.1
	Nelson	66.8	46.7	55.9	46.3
	Lake Sherburne	66.2	49.9	45.6	29.7
Yellowstone	Mystic Lake	21.0	10.8	1.1	6.0
	Tongue River	68.0	-	-	40.8
	Cooney	27.4	16.0	23.2	17.3
Bighorn	Bighorn Lake	1,356.0	764.0	820.4	810.3

Average based on 1958-72 period.

SNOW

DRAINAGE BASIN and/or SNDW COURSE		THIS YEAR			PAST RECORD	
NAME	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Average
ARCH FALLS	7350	5/27	25	11.8	23.8	9.2
BADGER PASS	6900	5/29	80	44.8	55.6	-
BALD RIDGE	7500	5/25	93	47.6	-	-
BANFIELD MOUNTAIN	5600	5/24	11	5.3	20.5	4.1
BANFIELD MOUNTAIN PILLOW	5600	5/24	SP	1.0	17.0	1.3
BLACK BEAR	7950	5/27	64	35.5	48.1	-
BLACK BEAR PILLOW	7950	5/27	SP	32.9	43.4	-
BLACK PINE	7100	5/26	12	5.6	16.0	3.0
BLACK PINE PILLOW	7100	5/26	SP	6.8	18.3	2.3
BLUE LAKE	5900	5/29	23	11.0	32.1	-
BRIDGER BOWL	7250	5/28	35	19.3	34.8	22.8
BRIDGER BOWL PILLOW	7250	5/28	SP	18.0	30.2	18.8
BRISTOW CREEK	3900	5/24	0	.0	.0	-
CALVERT CREEK	6450	5/26	0	.0	-	-
CAMP MISERY	6400	5/27	74	37.5	53.0	-
CEDAR GROVE	4100	5/25	0	.0	.0	.0
COOKE STATION	8150	6/01	24	12.2	23.4	10.9
DAVIS CREEK	5400	5/24	0	.0	13.2	1.8
DEADMAN CREEK	6450	5/28	0	.0	5.8	.0
DEADMAN CREEK PILLOW	6450	5/28	SP	.0	5.3	.0
DESERT MOUNTAIN	5600	5/28	0	.0	7.0	.0
DEVILS SLIDE	8100	5/27	57	27.0	40.9	23.8
DIVIDE	7800	5/25	0	.0	-	-
DIVIDE PILLOW	7800	5/25	SP	.3	-	-
EMERY CREEK	4350	5/28	0	.0	-	-
FISHER CREEK	9100	6/01	80	41.6	49.4	32.1
GARVER CREEK	4250	5/24	0	.0	.0	-
GARVER CREEK PILLOW	4250	5/24	SP	.0	.0	-
GIBBONS PASS	7100	5/28	16	8.3	31.9	8.6
GRAVE CREEK	4300	5/26	0	.0	2.8	1.6
GRAVE CREEK PILLOW	4300	5/26	SP	.0	-	-
GUNSIGHT LAKE	6300	5/29	57	31.2	43.3	-
HAWKINS LAKE	6450	5/24	52	25.9	37.1	20.2
HAWKINS LAKE PILLOW	6450	5/24	SP	28.6	32.5	20.4
HELL ROARING DIVIDE	5770	5/27	22	10.6	24.8	12.6
HIGHWOOD DIVIDE	5650	5/28	0	.0	2.7	-
HIGHWOOD STATION	4600	5/28	0	.0	-	-
HOOD MEADOW	6600	5/27	5	2.2	17.0	1.8
HOODOO BASIN PILLOW	6000	6/01	SP	29.0	42.5	33.8
KINGS HILL	7500	5/28	12	5.0	21.8	-
LAKE CREEK	6100	5/25	0	.0	1.6	-
LEMHI RIDGE	8100	5/26	0	.0	-	-
LEMHI RIDGE PILLOW	8100	5/26	SP	2.6	-	-
LICK CREEK	6860	5/27	0	.0	13.9	.4
LICK CREEK PILLOW	6860	5/27	SP	.0	8.7	.2
LOOKOUT (ID)	5250	5/26	31	14.6	28.8	15.8
LOST HORSE	5940	5/30	55	28.4	41.1	21.4
LOST SOUL	4800	5/25	0	.0	.0	.0

Average based On 1958-72 period. A - Aeriol observotion; water content estimated.
SP - Snow Pillow observotian; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (inches) Last Year	PAST RECORD: Water Content (inches) Average
MADISON PLATEAU	7750	5/27	28	14.0	23.4	-
MADISON PLATEAU PILLOW	7750	5/27	SP	15.7	22.7	6.9
MAYNARD CREEK	6210	5/28	0	.0	16.5	5.4
MAYNARD CREEK PILLOW	6210	5/28	SP	2.2	11.7	4.0
MEADOW CREEK PILLOW	4000	6/01	SP	.0	.4	-
NOISY BASIN	6040	5/27	59	31.5	52.1	-
NOISY BASIN PILLOW	6040	5/27	SP	22.5	39.3	-
NORTH FORK JOCKO	6330	6/02	42	21.8	48.3	32.0
NORTHEAST ENTRANCE	7400	5/31	0	.0	6.0	.2
NORTHEAST ENTRANCE PILL.	7400	6/01	SP	.0	5.7	.0
OPHIR PARK	7150	5/31	4	2.0	25.2	-
PETERSON MEADOWS	7200	5/27	0	.0	-	-
PETERSON MEADOWS PILLOW	7200	5/27	SP	5.3	-	-
PICKET PIN UPPER	8100	5/31	52	25.0	36.4	-
POORMAN CREEK	5100	5/25	16	8.2	23.1	8.5
POORMAN CREEK PILLOW	5100	5/25	SP	12.4	24.6	6.2
ROCKER PEAK	8000	6/01	13	5.4	27.6	9.2
ROCKER PEAK PILLOW	8000	6/01	SP	14.6	28.5	14.3
ROCKY BOY	4700	5/28	0	.0	.0	-
ROCKY BOY PILLOW	4700	5/28	SP	.0	.0	.0
SADDLE MOUNTAIN	7940	5/28	46	23.5	38.7	18.7
SADDLE MOUNTAIN PILLOW	7940	5/28	SP	25.8	35.2	19.8
SHOWER FALLS	8100	5/27	64	32.5	44.2	27.5
SHOWER FALLS PILLOW	8100	5/27	SP	26.1	39.0	24.3
SKALKAHO SUMMIT	7260	5/26	38	18.8	33.2	14.6
SPOTTED BEAR MOUNTAIN	7000	5/29	0	.0	6.8	-
SPUR PARK	8000	5/28	24	10.4	28.6	18.1
SPUR PARK PILLOW	8100	5/28	SP	12.5	27.9	17.5
STAHL PEAK	6050	5/26	61	31.9	42.7	30.6
STAHL PEAK PILLOW	6050	5/26	SP	27.4	-	-
STAR LAKE E	9650	6/01	82	44.5	58.2	-
TEPEE CREEK	8000	5/25	28	11.0	22.1	-
TEPEE CREEK PILLOW	8000	5/25	SP	5.6	16.9	-
TRINKUS LAKE	6100	5/29	30	16.6	38.1	-
TWELVEMILE CREEK	5600	5/30	0	.0	13.6	.6
TWELVEMILE CREEK PILLOW	5600	5/30	SP	.0	15.1	.0
TWIN CREEKS	3580	5/29	0	.0	.0	-
TWIN LAKES	6510	5/30	67	37.2	52.1	31.4
TWIN LAKES PILLOW	6400	5/30	SP	35.5	47.3	28.1
UPPER HOLLAND LAKE	6200	5/29	44	22.0	32.7	-
WEASEL DIVIDE	5450	5/26	42	20.7	30.9	19.6
WHISKEY CREEK	6800	5/27	0	.0	10.5	-
WHISKEY CREEK PILLOW	6800	5/27	SP	3.6	11.9	-
WHITE MILL	8700	6/01	56	28.4	34.8	24.5
WHITE MILL PILLOW	8700	6/01	SP	19.6	29.1	-

Average based On 1958-72 period. A - Aeriol observotion; woter content estimoted.
SP - Snow Pillow observotion; woter content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
NAME	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
					Last Year	Average
LATE ARRIVING DATA						
BIG CREEK	6750	6/03	65	36.0	51.6	46.5
FATTY CREEK	5500	6/04	3	1.7	19.6	7.6
MOUNT LOCKHART PILLOW	6400	6/04	SP	12.0	17.8	-
STUART MOUNTAIN	7400	6/04	25	12.4	33.1	20.3
TV MOUNTAIN	6800	6/04	10	4.4	22.5	9.9

Averoge based On 1958-72 period. A - Aeriol observation; water content estimated.
SP - Snow Pillow observation; water content only.

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DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
NAME	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Average

SUPPLEMENTAL MEASUREMENTS 1976

JANUARY 1						
BANFIELD MOUNTAIN	5600	12/30	SP	11.0	9.4	9.6
BIG COULEE	5100	1/06	15	2.8	2.5	-
CARROT BASIN	9000	12/31	62	20.8	12.9	17.0
CARROT BASIN PILLOW	9000	12/31	SP	16.2	9.2	10.9
HIGHWOOD DIVIDE	5650	1/06	25	5.8	3.5	-
HIGHWOOD STATION	4600	1/06	12	2.7	1.5	-
FEBRUARY 1						
COMBINATION	5600	1/28	17	4.8	3.8	5.6
FISHER CREEK PILLOW	9100	1/27	SP	31.2	23.0	25.5
MARCH 1						
COTTONWOOD CREEK	6400	3/04	38	10.2	8.2	-
PETERSON MEADOWS PILLOW	7200	2/26	SP	12.5	9.2	-
WHISKEY CREEK PILLOW	6800	2/27	SP	18.6	13.9	-
APRIL 1						
GOLD CREEK LAKE	7200	3/29	76	23.4	16.2	17.1
LUBRECHT FLUME	4800	3/31	SP	6.8	9.0	5.1
MEADOW CREEK PILLOW	4000	4/01	SP	5.7	10.2	-
STAHL PEAK PILLOW	6050	3/29	SP	33.8	-	-
TEN MILE LOWER	6600	3/31	28	8.8	10.2	7.8
MAY 1						
FRED BURR PASS	8000	5/06	94	38.3	33.0	32.6
TRAIL CREEK	7090	4/29	44	14.6	15.7	-
MAY 15						
ARCH FALLS	7350	5/13	42	17.4	23.4	14.5
DEADMAN CREEK PILLOW	6450	5/14	SP	0.0	10.5	3.2
NORTH FORK ELK CREEK PILLOW	6250	5/18	SP	0.0	23.2	5.3
SKALKAHO SUMMIT	7260	5/12	63	29.6	35.0	24.9
SLAG-A-MELT LAKE		NO MEASUREMENT				

Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
					Water Content (inches)	
NAME	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average

CORRECTIONS TO PREVIOUSLY PUBLISHED 1976 DATA

FEBRUARY 1

BIG SKY	7700	1/28	45	13.4	10.7	-
COLE CREEK PILLOW	7850	2/02	SP	1.31	13.9	-
GRAVE CREEK PILLOW	4300	1/26	SP	10.3	-	-
HEGBEN DAM	6550	1/29	34	11.4	8.3	8.2
LEMHI RIDGE PILLOW	8100	2/03	SP	10.9	-	-
LONE MOUNTAIN	8880	1/28	60	20.6	16.4	-
NORTHEAST ENTRANCE	7400	1/27	36	10.6	7.8	6.6
STAHL PEAK PILLOW	6050	1/26	SP	23.8	-	-

MARCH 1

ABUNDANCE LAKE	8800	2/22	70	24.8	16.6	17.7
AMBROSE	6480	3/01	56	15.0	11.4	11.7
BAREE CREEK	5500	3/03	142	53.4	21.7	19.4
BAREE TRAIL	3800	3/02	42	11.5	13.3	10.5
COPPER BOTTOM PILLOW	5200	2/27	SP	13.9	-	-
COPPER CAMP PILLOW	6950	2/27	SP	38.1	-	-
DISCOVERY BASIN	7050	3/02	43	11.3	10.9	-
DIVIDE PILLOW	7800	2/22	SP	7.4	-	-
GIBBONS PASS	7100	2/24	69	24.1	24.9	20.5
GRAVE CREEK PILLOW	4300	2/23	SP	15.2		
INTERGAARD	6450	2/29	41	11.4	8.3	7.7
LEMHI RIDGE PILLOW	8100	2/22	SP	12.9	-	-
LOLO PASS PILLOW	5230	3/01	SP	30.0	-	-
SHOWER FALLS	8100	2/26	70	24.5	22.9	21.6
STAHL PEAK PILLOW	6050	2/23	SP	28.6	-	-
TV MOUNTAIN	6800	2/28	66	19.0	18.3	17.0

APRIL 1

CALVERT CREEK PILLOW	6450	4/01	SP	11.0	-	-
COPPER BOTTOM PILLOW	5200	4/01	SP	15.5	-	-
COPPER CAMP PILLOW	6950	4/01	SP	45.4	-	-
COPPER MOUNTAIN	7700	4/02	44	14.4	15.5	12.3
DIVIDE PILLOW	7800	3/29	SP	9.9	-	-
GOAT MOUNTAIN	7000	4/02	44	14.2	10.4	11.8
GRAVE CREEK PILLOW	4300	3/27	SP	19.8	-	-
HEART LAKE TRAIL	4800	4/02	77	28.4	28.7	23.4
HOODOO BASIN	6000	4/02	154	63.4	56.8	53.8
HOODOO CREEK	5900	4/02	146	59.3	51.8	50.3
INTERGAARD	6450	4/01	44	13.2	10.9	9.2
KISHENEHN	3890	3/28	27	7.9	10.5	8.4
LEMHI RIDGE PILLOW	8100	3/29	SP	16.4	-	-
LOLO PASS PILLOW	5230	4/01	SP	31.4	-	-
MONUMENT PEAK	8800	4/02	95	37.2	30.6	27.8
NOISY BASIN	6040	3/29	122	44.5	48.6	-

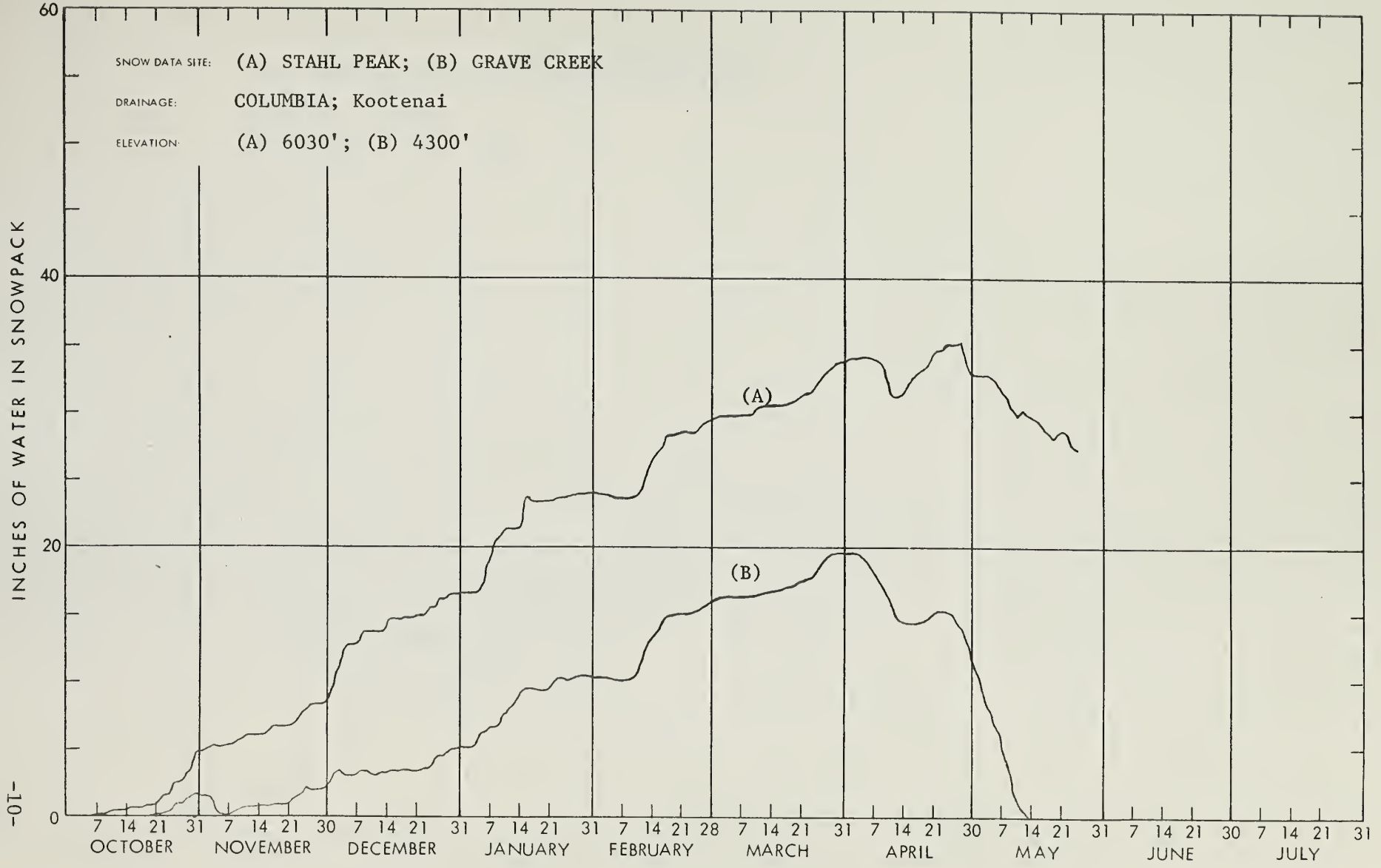
Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

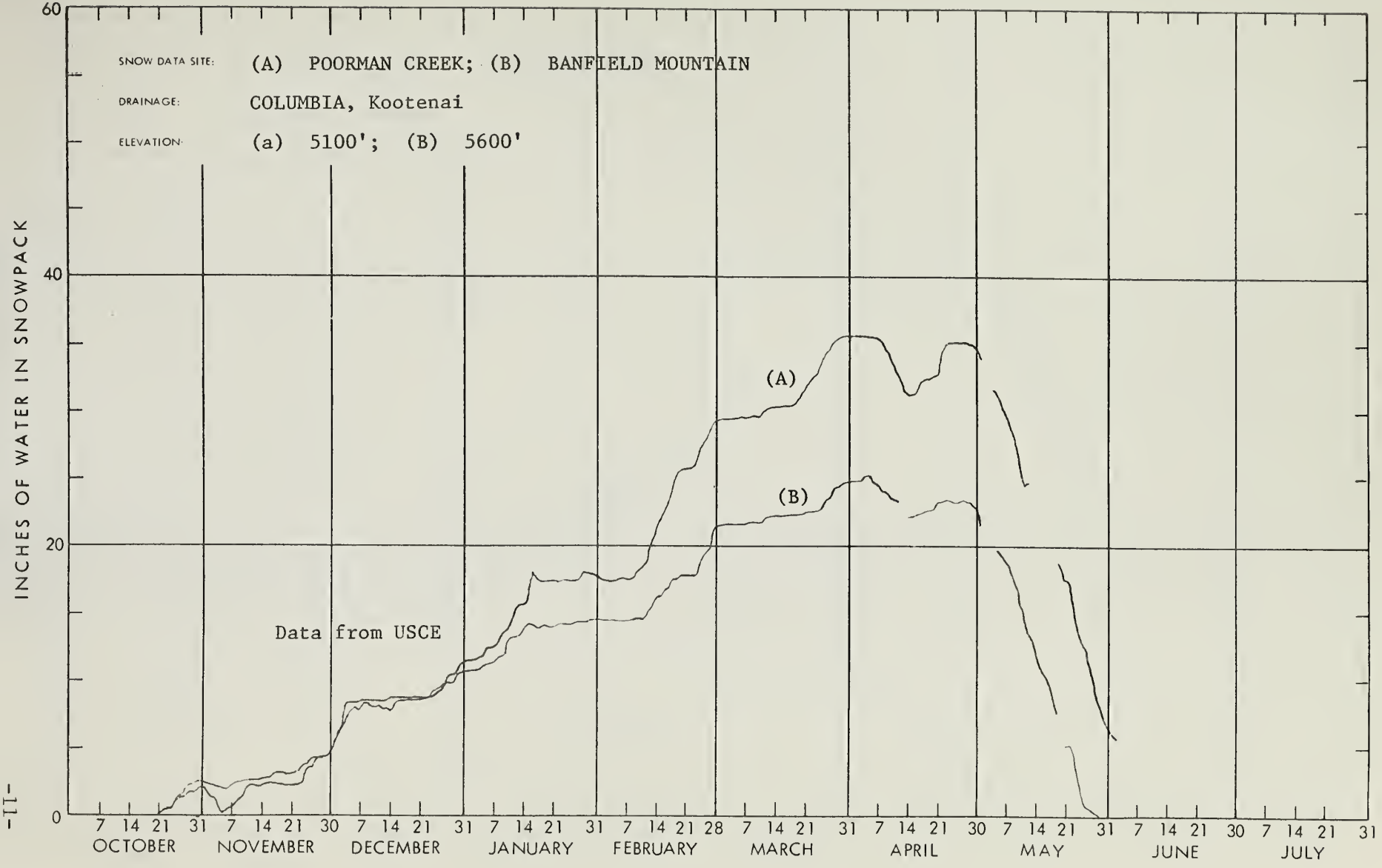
CORRECTIONS TO PREVIOUSLY PUBLISHED 1976 DATA

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (inches) Last Year	PAST RECORD: Water Content (inches) Average
APRIL 1 (Contd)						
PICNIC GROUNDS	6200	3/31	19	6.0	5.7	4.6
PIPESTONE PASS	7200	4/01	30	8.7	9.0	6.2
POORMAN CREEK PILLOW	5100	3/31	SP	35.4	42.1	32.1
ROCK CREEK	5600	4/02	29	9.9	13.8	10.2
STAHL PEAK	6050	3/29	120	43.1	39.8	41.4
STUART MOUNTAIN	7400	4/04	104	43.3	36.4	34.2
TEN MILE MIDDLE	6800	3/31	49	16.2	15.6	12.6
TEN MILE UPPER	8000	3/31	56	18.8	16.5	15.0
MAY 1						
BAREE MIDWAY	4600	5/03	79	37.1	47.8	35.1
CALVERT CREEK PILLOW	6450	4/28	SP	7.1	-	-
CHESSMAN RESERVOIR	6200	5/01	15	5.0	11.5	2.5
COPPER BOTTOM PILLOW	5200	4/30	SP	13.5	-	-
COPPER CAMP PILLOW	6950	4/30	SP	45.3	-	-
ELK HORN SPRINGS	7800	4/30	41	14.2	13.9	9.1
FISH CREEK	8000	5/03	60	20.2	-	-
GIBBONS PASS	7100	4/25	72	30.1	33.9	24.2
GRAVE CREEK PILLOW	4300	4/26	SP	14.5	-	-
HOODOO BASIN	6000	4/28	140	63.8	60.8	55.2
INTERGAARD	6450	5/01	43	14.7	16.2	9.1
PETERSON MEADOWS	7200	4/29	65	18.4	16.3	11.9
PICKET PIN UPPER	8100	5/02	94	36.0	31.2	-
PICNIC GROUNDS	6200	5/01	15	3.8	7.6	2.8
SADDLE MOUNTAIN	7940	4/25	92	35.7	38.9	28.8
STAHL PEAK PILLOW	6050	4/26	SP	35.1	-	-
STORM LAKE	7780	4/30	76	22.7	22.7	17.4
TEN MILE MIDDLE	6800	4/30	65	19.4	19.5	13.8
TEN MILE UPPER	8000	4/29	72	22.6	22.2	17.1
TWENTY-ONE MILE	7150	4/29	53	21.8		
MAY 15						
CAMP MISERY	6400	5/15	92	45.1	54.5	-
GIBBONS PASS	7100	5/15	44	23.1	37.0	19.3
PICKET PIN D	9450	5/17	63	29.5A	47.5	-
SPOTTED BEAR MOUNTAIN	7000	5/16	0	0.0	15.0	-

Average based On 1958-72 period. A - Aerial observation; water content estimated.
SP - Snow Pillow observation; water content only.

WSFB-X13C


SNOW DATA SITE: (A) STAHL PEAK; (B) GRAVE CREEK
DRAINAGE: COLUMBIA; Kootenai
ELEVATION: (A) 6030'; (B) 4300'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE: (A) POORMAN CREEK; (B) BANFIELD MOUNTAIN
DRAINAGE: COLUMBIA, Kootenai
ELEVATION: (a) 5100'; (B) 5600'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
Data from USCE
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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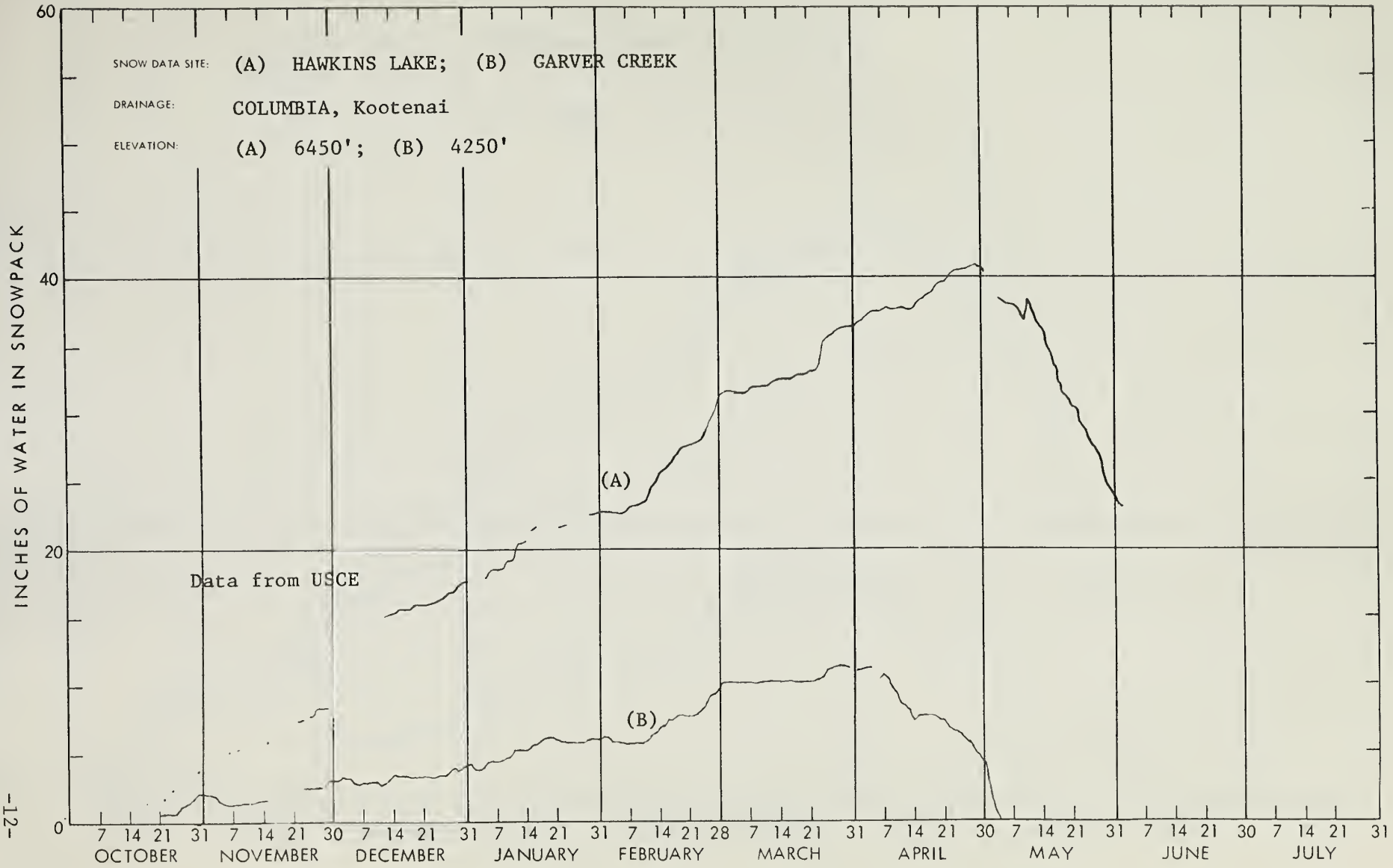
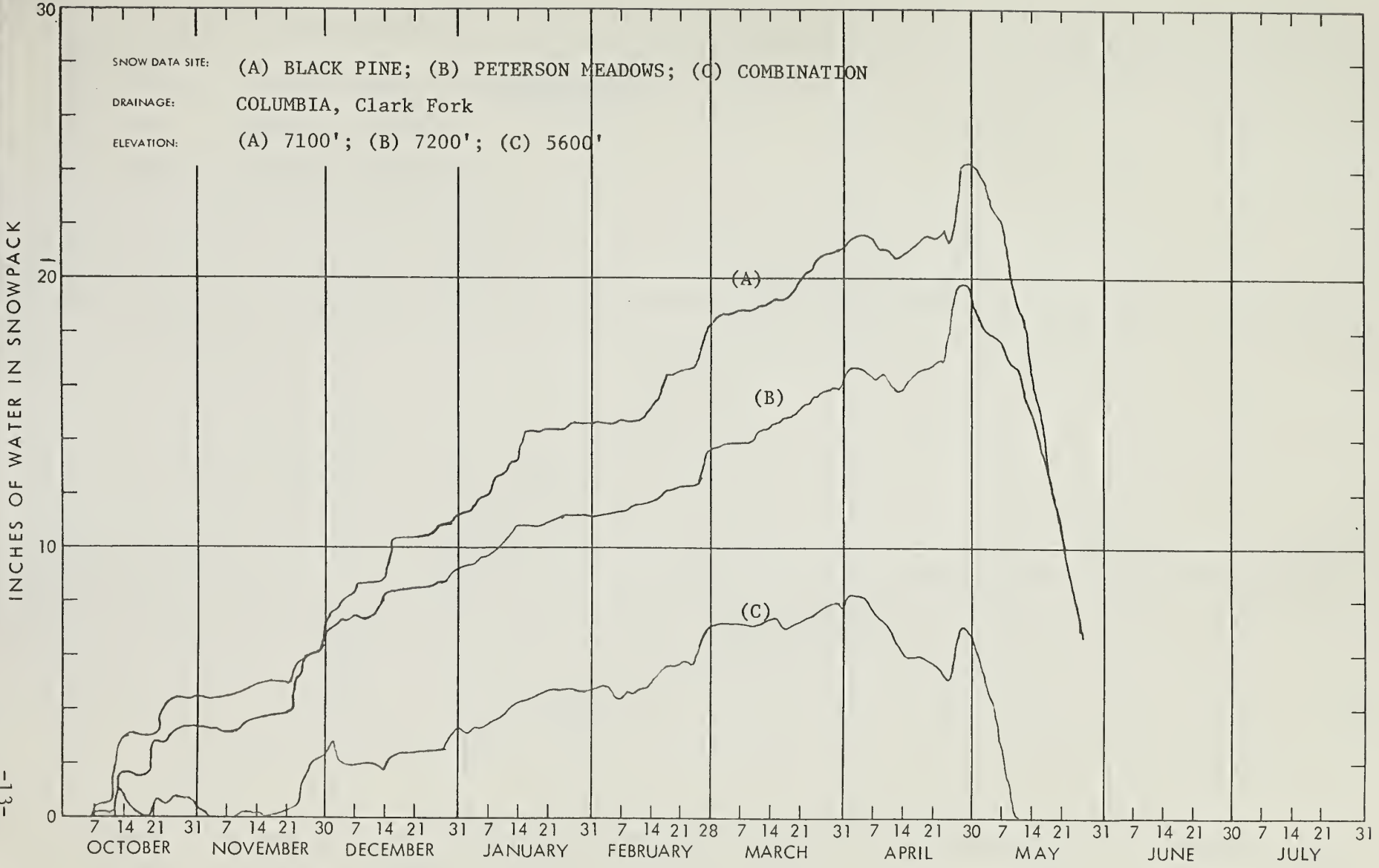

SNOW DATA SITE: (A) HAWKINS LAKE; (B) GARVER CREEK
DRAINAGE: COLUMBIA, Kootenai
ELEVATION: (A) 6450'; (B) 4250'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
Data from USCE
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) BLACK PINE; (B) PETERSON MEADOWS; (C) COMBINATION
DRAINAGE: COLUMBIA, Clark Fork
ELEVATION: (A) 7100'; (B) 7200'; (C) 5600'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
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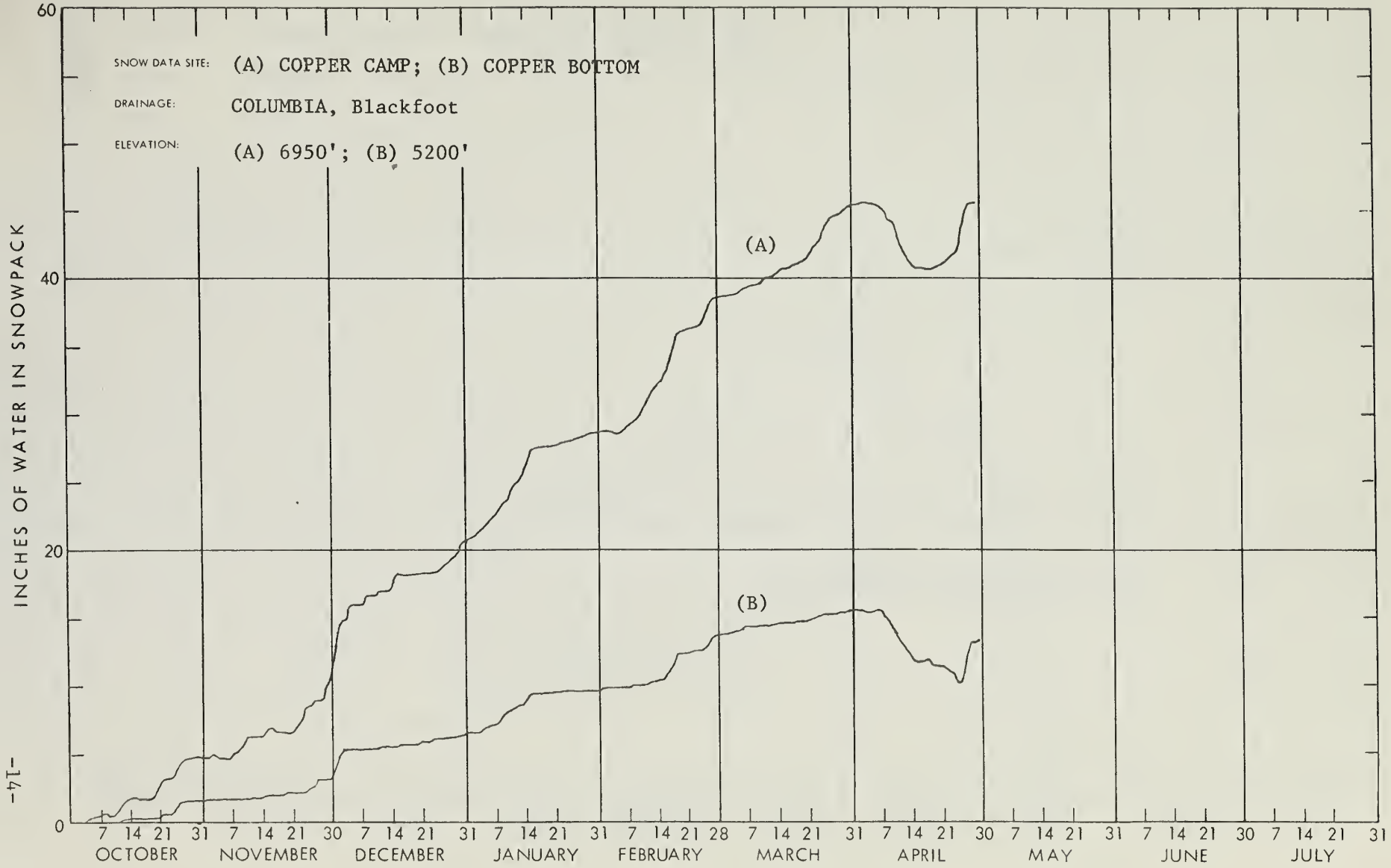
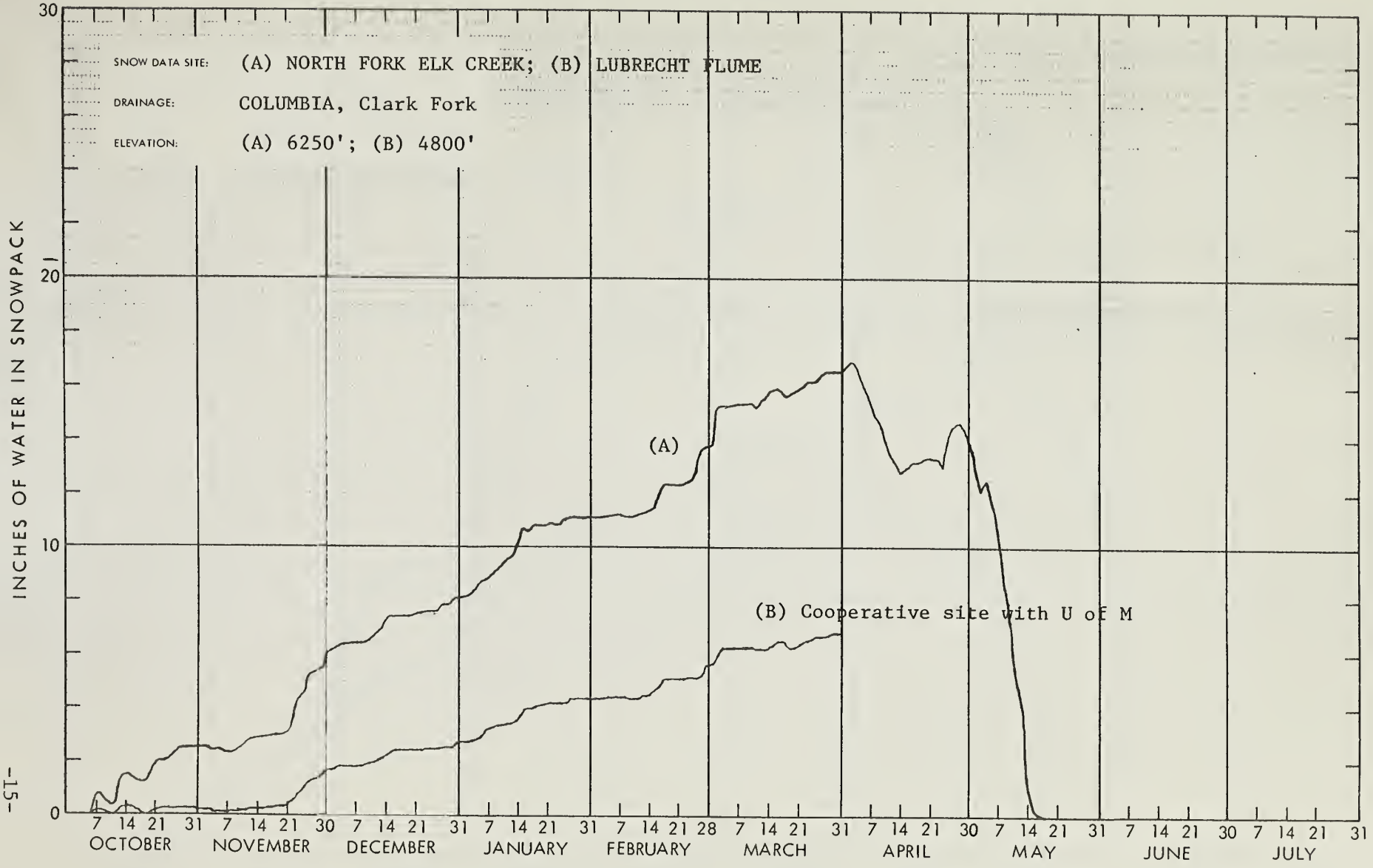
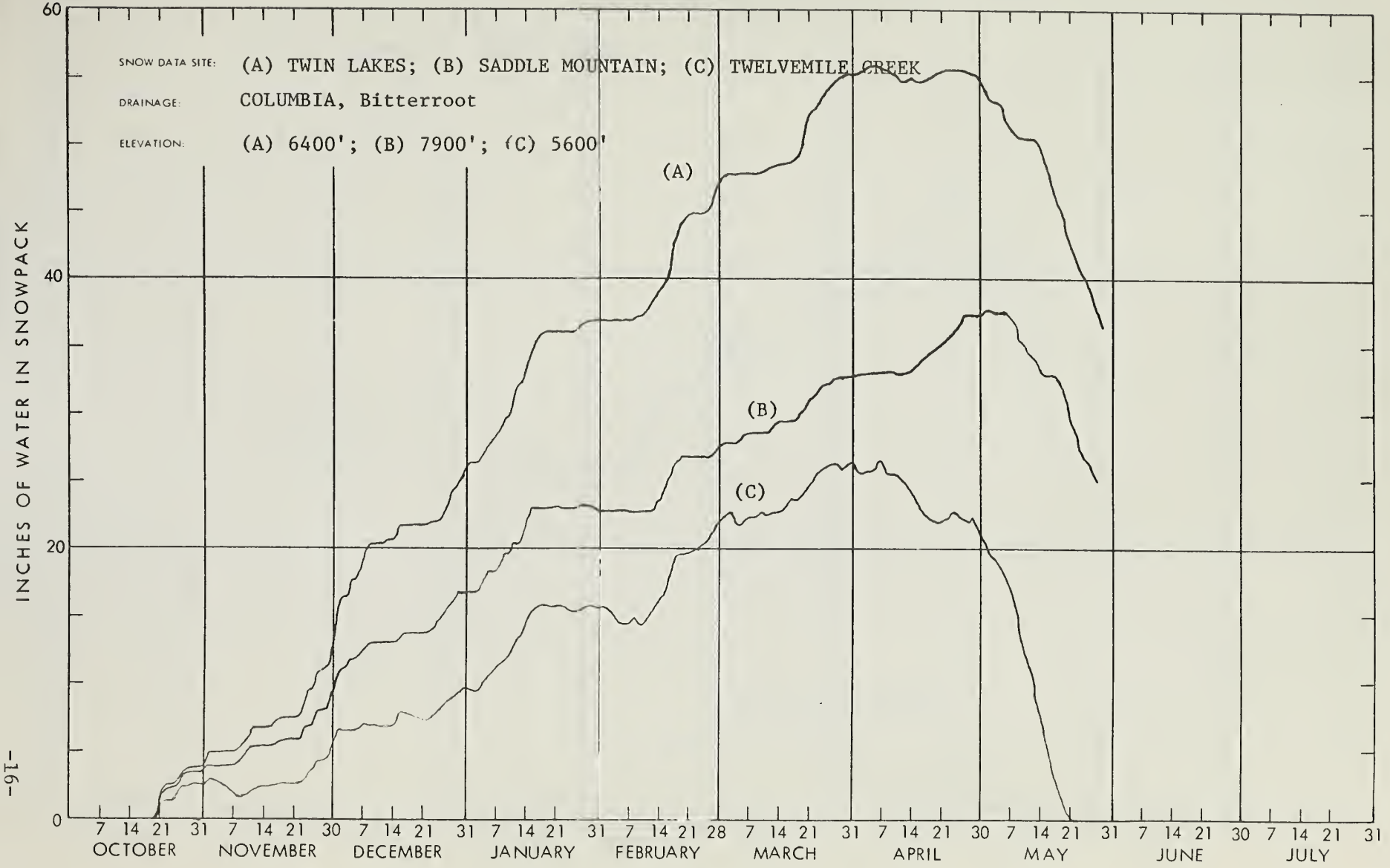
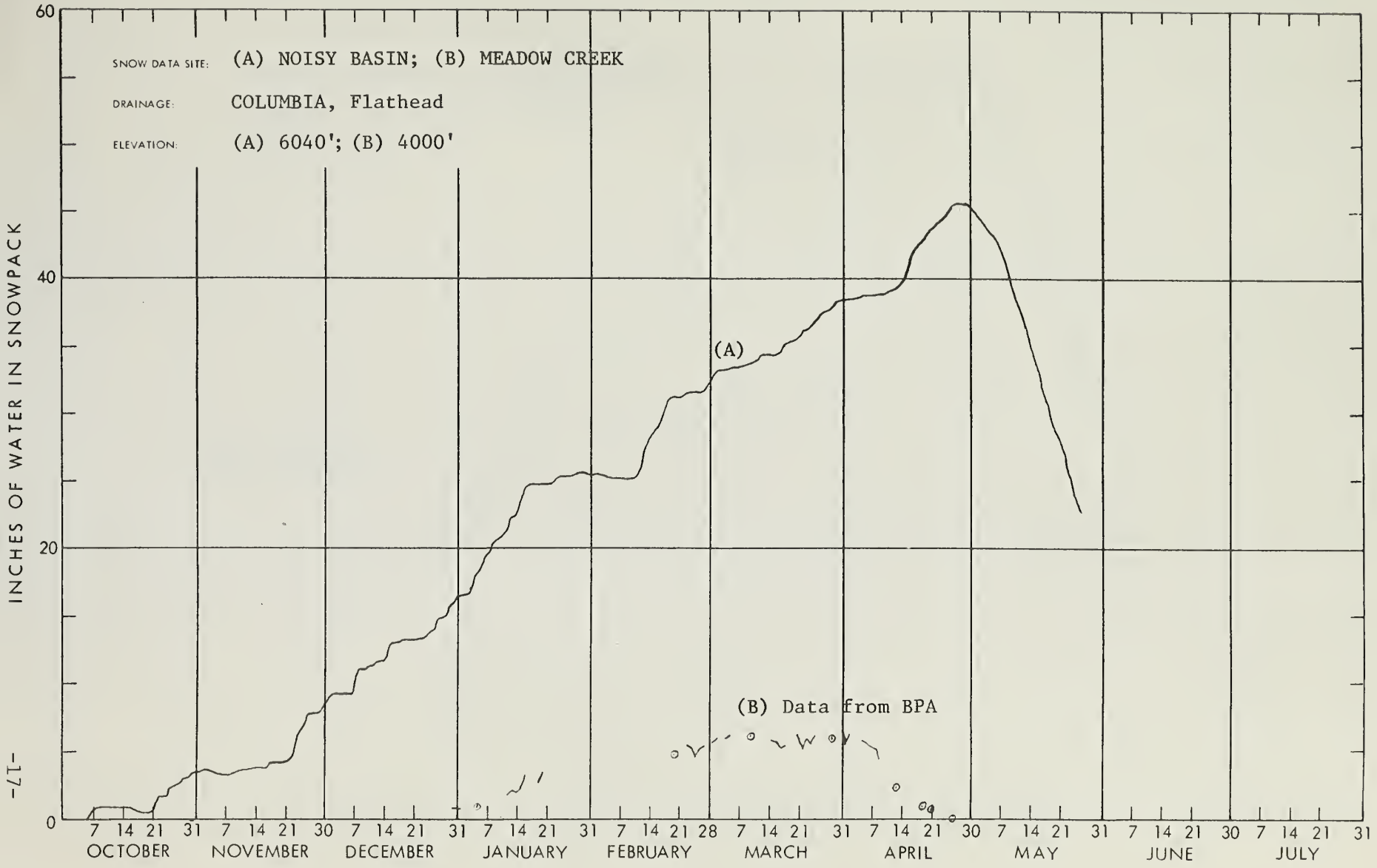
JULY


SNOW DATA SITE: (A) COPPER CAMP; (B) COPPER BOTTOM
DRAINAGE: COLUMBIA, Blackfoot
ELEVATION: (A) 6950'; (B) 5200'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) NORTH FORK ELK CREEK; (B) LUBRECHT FLUME
DRAINAGE: COLUMBIA, Clark Fork
ELEVATION: (A) 6250'; (B) 4800'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B) Cooperative site with U of M
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) TWIN LAKES; (B) SADDLE MOUNTAIN; (C) TWELVEMILE CREEK
DRAINAGE: COLUMBIA, Bitterroot
ELEVATION: (A) 6400'; (B) 7900'; (C) 5600'
(A)
(B)
(C)
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) NOISY BASIN; (B) MEADOW CREEK
DRAINAGE: COLUMBIA, Flathead
ELEVATION: (A) 6040'; (B) 4000'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B) Data from BPA
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
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FEBRUARY
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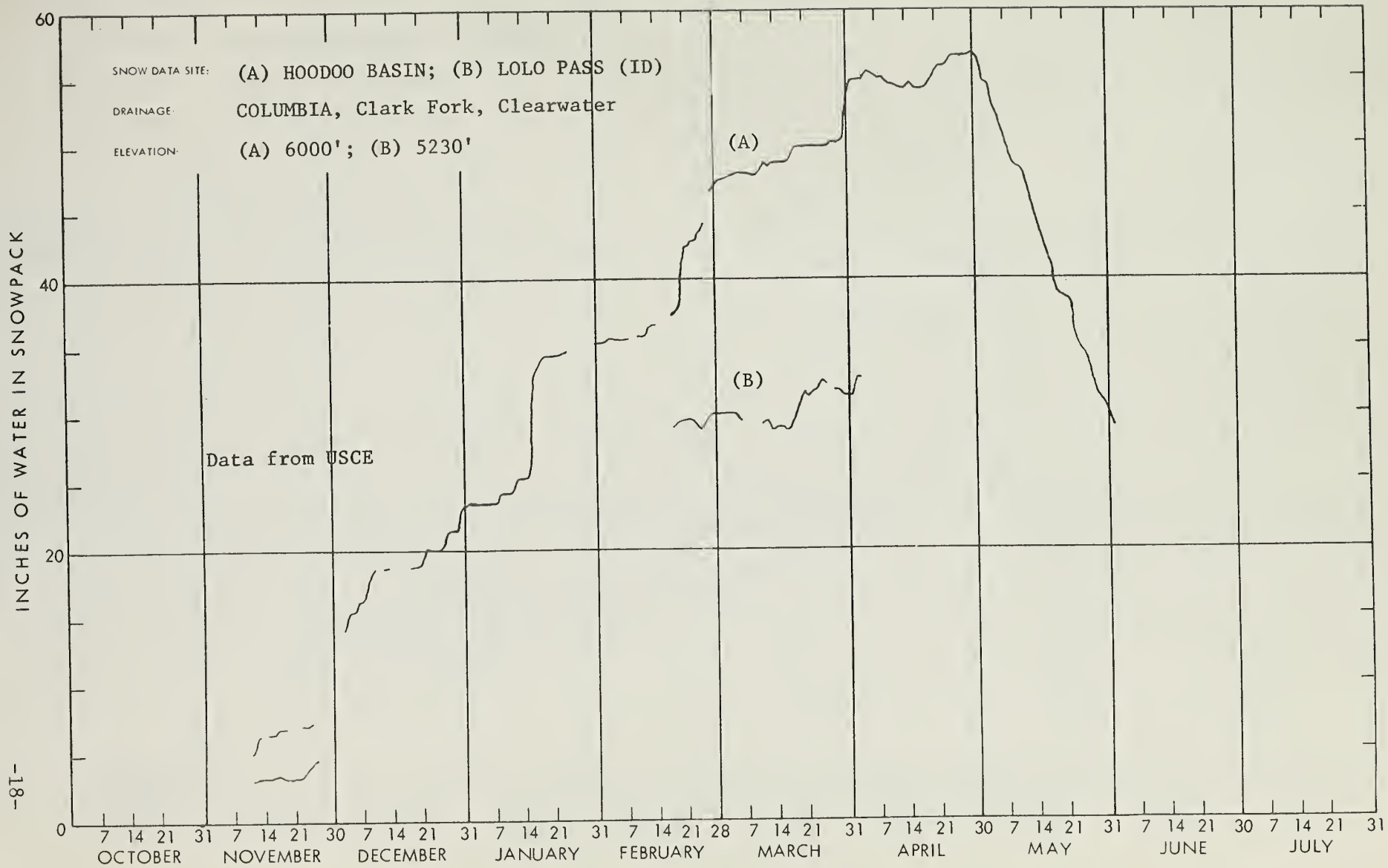
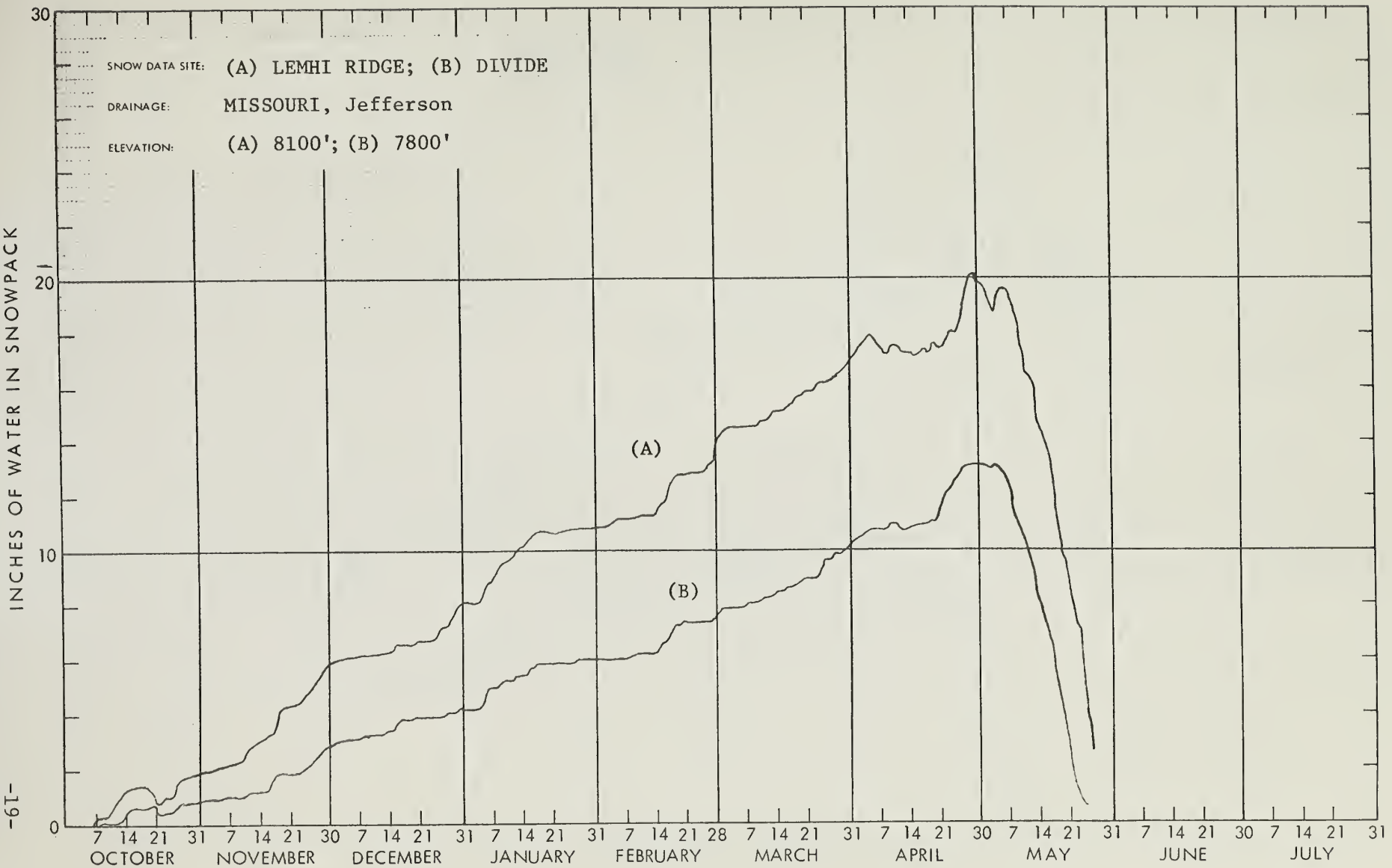
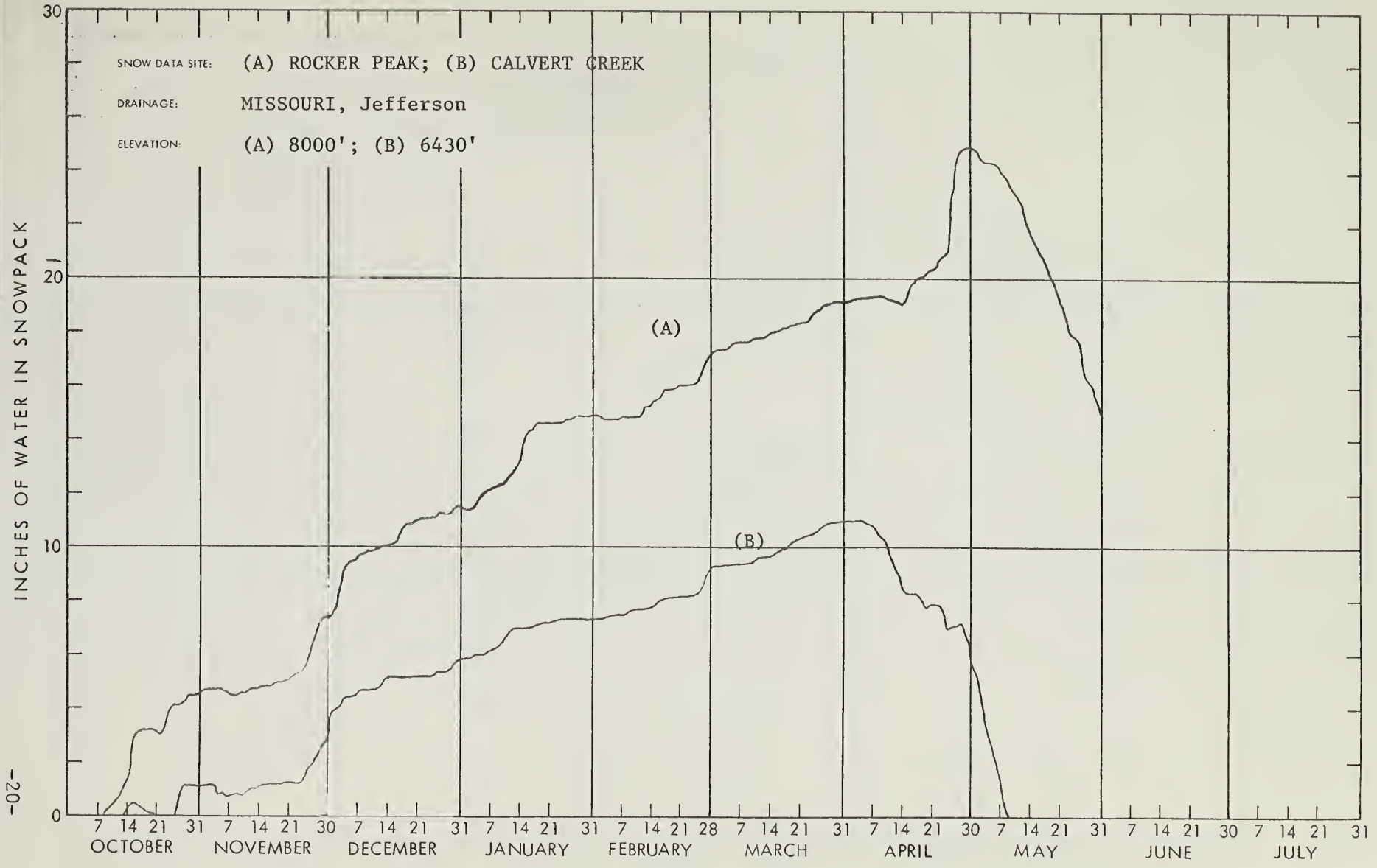
APRIL
MAY
JUNE
JULY


SNOW DATA SITE: (A) HOODOO BASIN; (B) LOLO PASS (ID)
DRAINAGE: COLUMBIA, Clark Fork, Clearwater
ELEVATION: (A) 6000'; (B) 5230'
(A)
(B)
Data from USCE
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) LEMHI RIDGE; (B) DIVIDE
DRAINAGE: MISSOURI, Jefferson
ELEVATION: (A) 8100'; (B) 7800'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) ROCKER PEAK; (B) CALVERT CREEK
DRAINAGE: MISSOURI, Jefferson
ELEVATION: (A) 8000'; (B) 6430'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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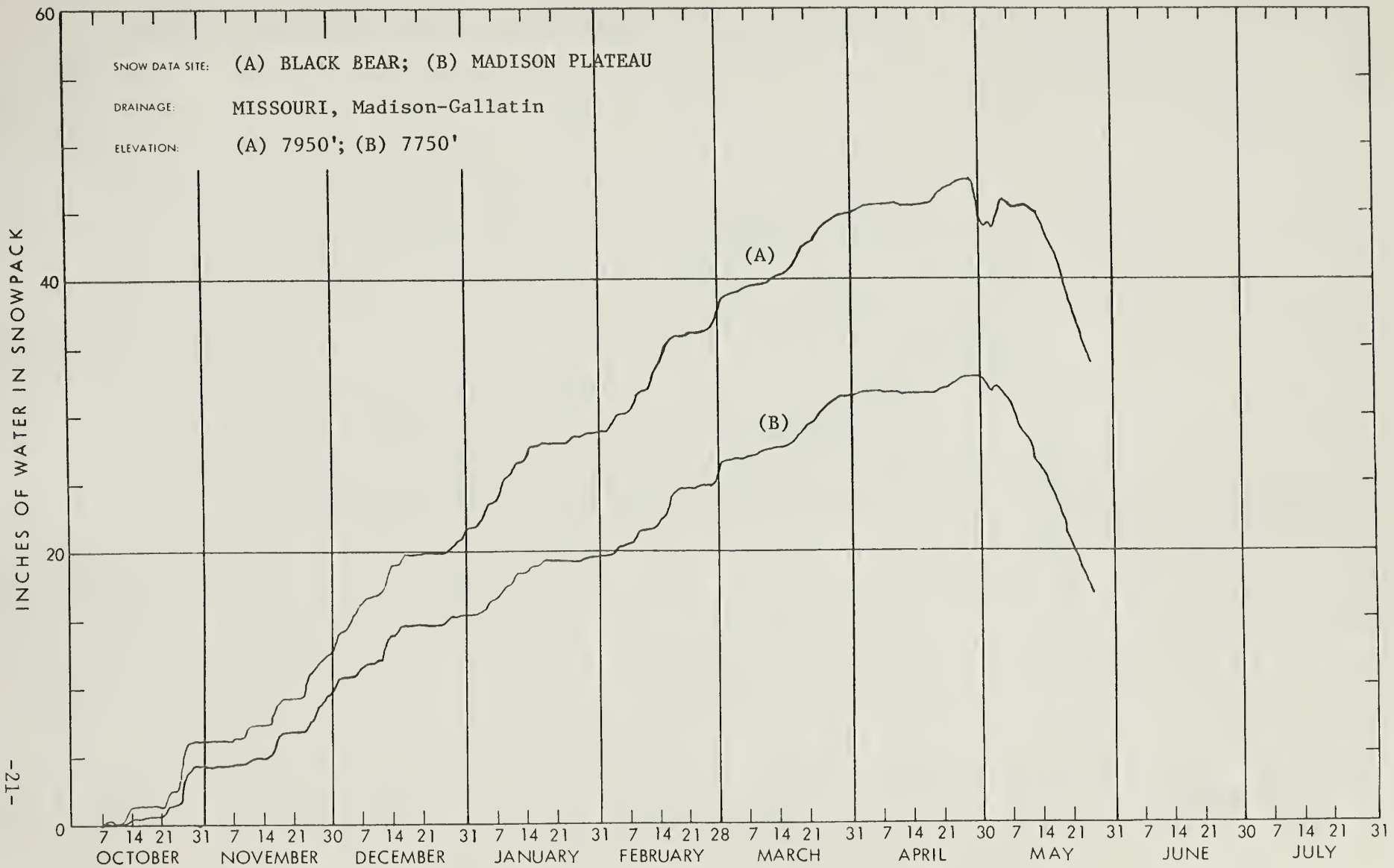
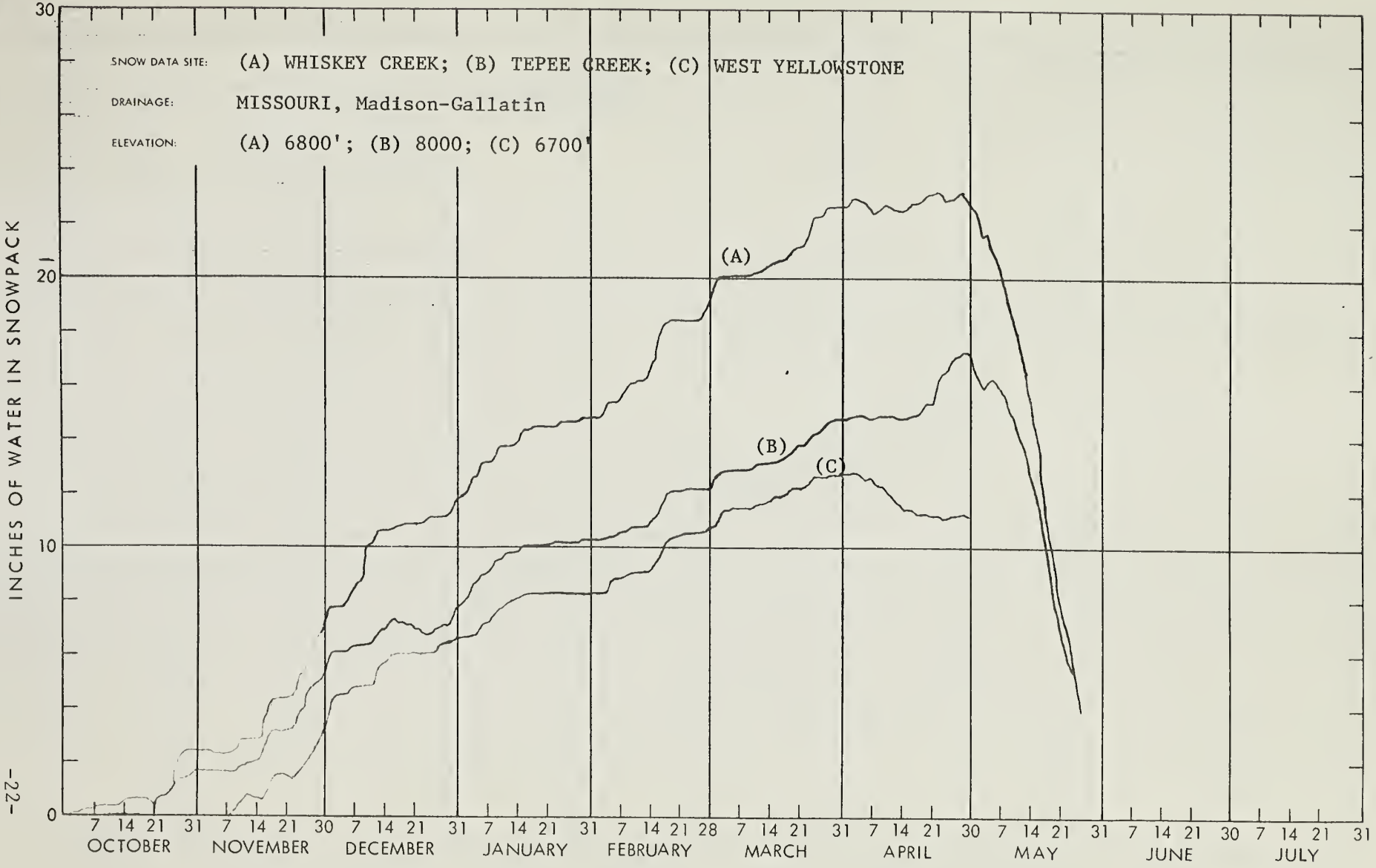
JUNE
JULY


SNOW DATA SITE: (A) BLACK BEAR; (B) MADISON PLATEAU
DRAINAGE: MISSOURI, Madison-Gallatin
ELEVATION: (A) 7950'; (B) 7750'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) WHISKEY CREEK; (B) TEPEE CREEK; (C) WEST YELLOWSTONE
DRAINAGE: MISSOURI, Madison-Gallatin
ELEVATION: (A) 6800'; (B) 8000; (C) 6700'
INCHES OF WATER IN SNOWPACK
0
10
20
30
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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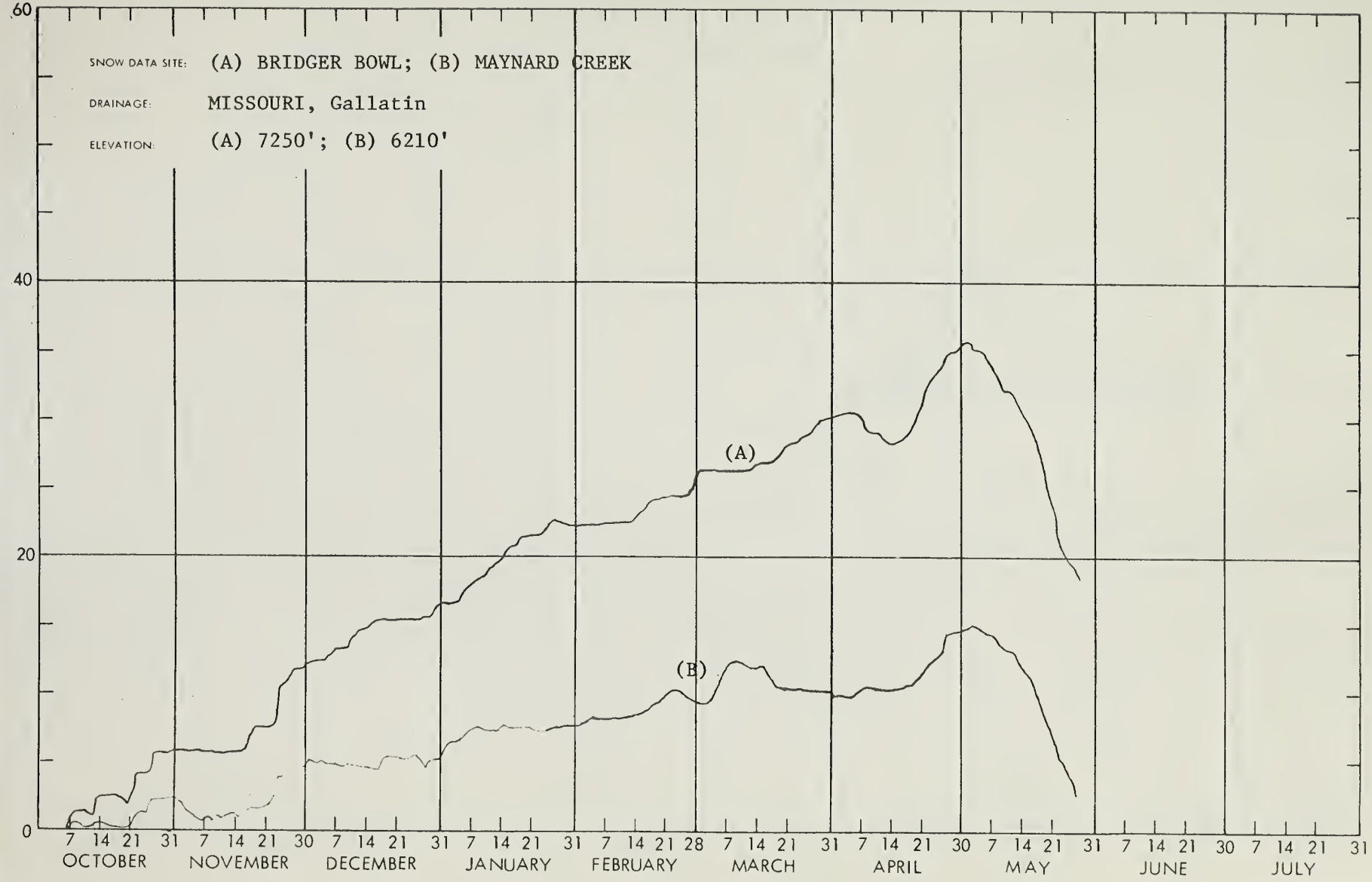
JUNE
JULY


SNOW DATA SITE: (A) BRIDGER BOWL; (B) MAYNARD CREEK
DRAINAGE: MISSOURI, Gallatin
ELEVATION: (A) 7250'; (B) 6210'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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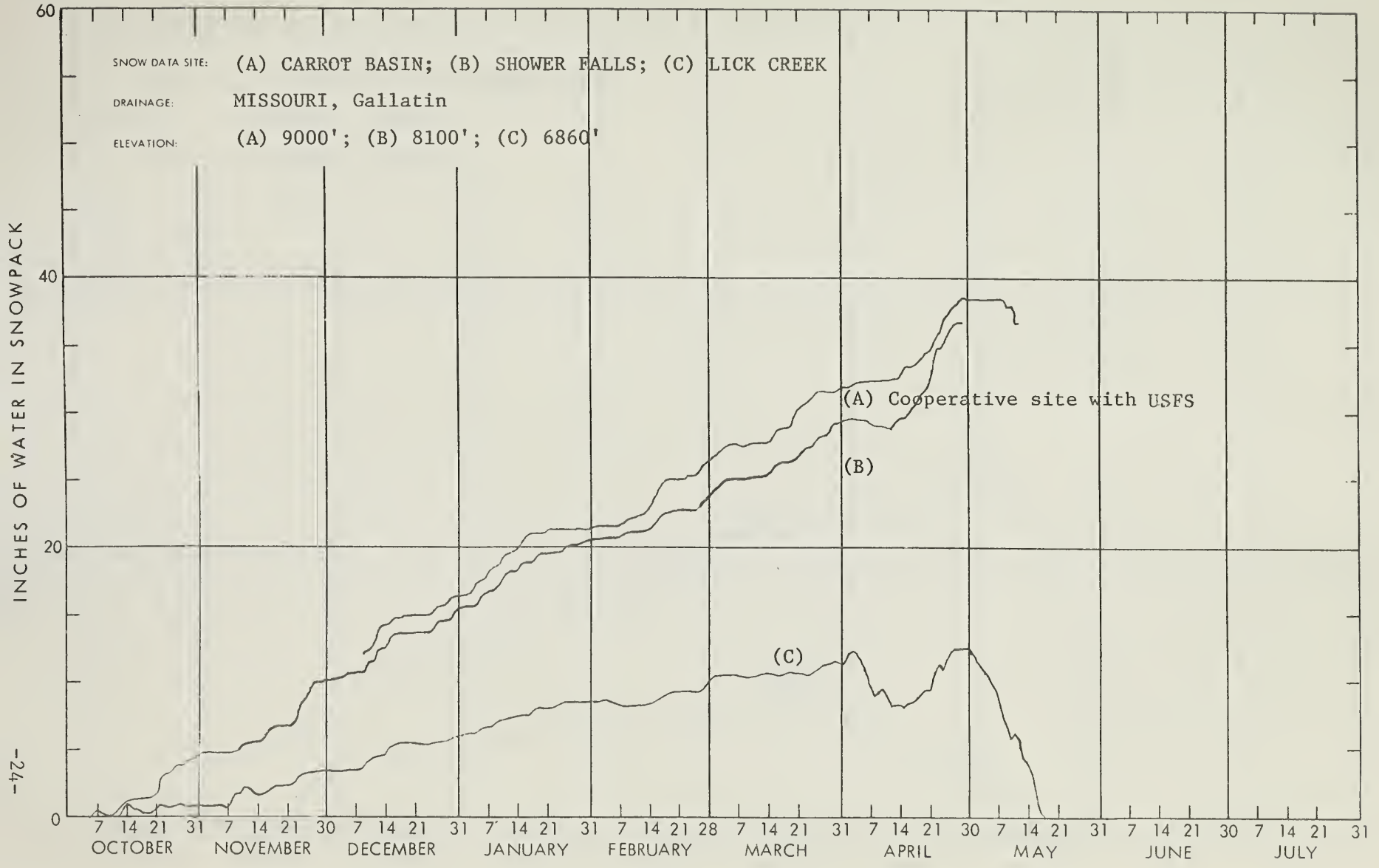
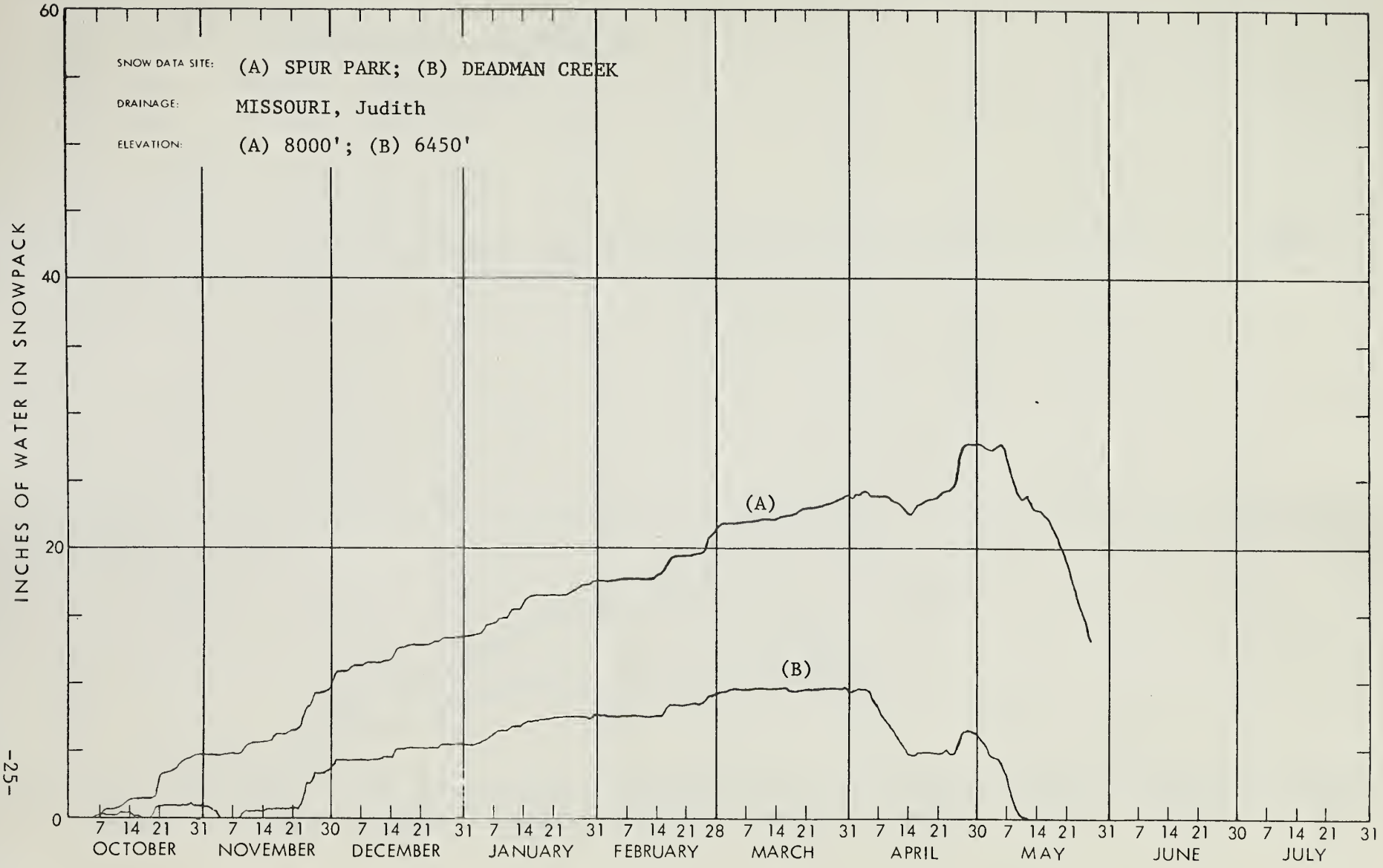

SNOW DATA SITE: (A) CARROT BASIN; (B) SHOWER FALLS; (C) LICK CREEK
DRAINAGE: MISSOURI, Gallatin
ELEVATION: (A) 9000'; (B) 8100'; (C) 6860'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A) Cooperative site with USFS
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) SPUR PARK; (B) DEADMAN CREEK
DRAINAGE: MISSOURI, Judith
ELEVATION: (A) 8000'; (B) 6450'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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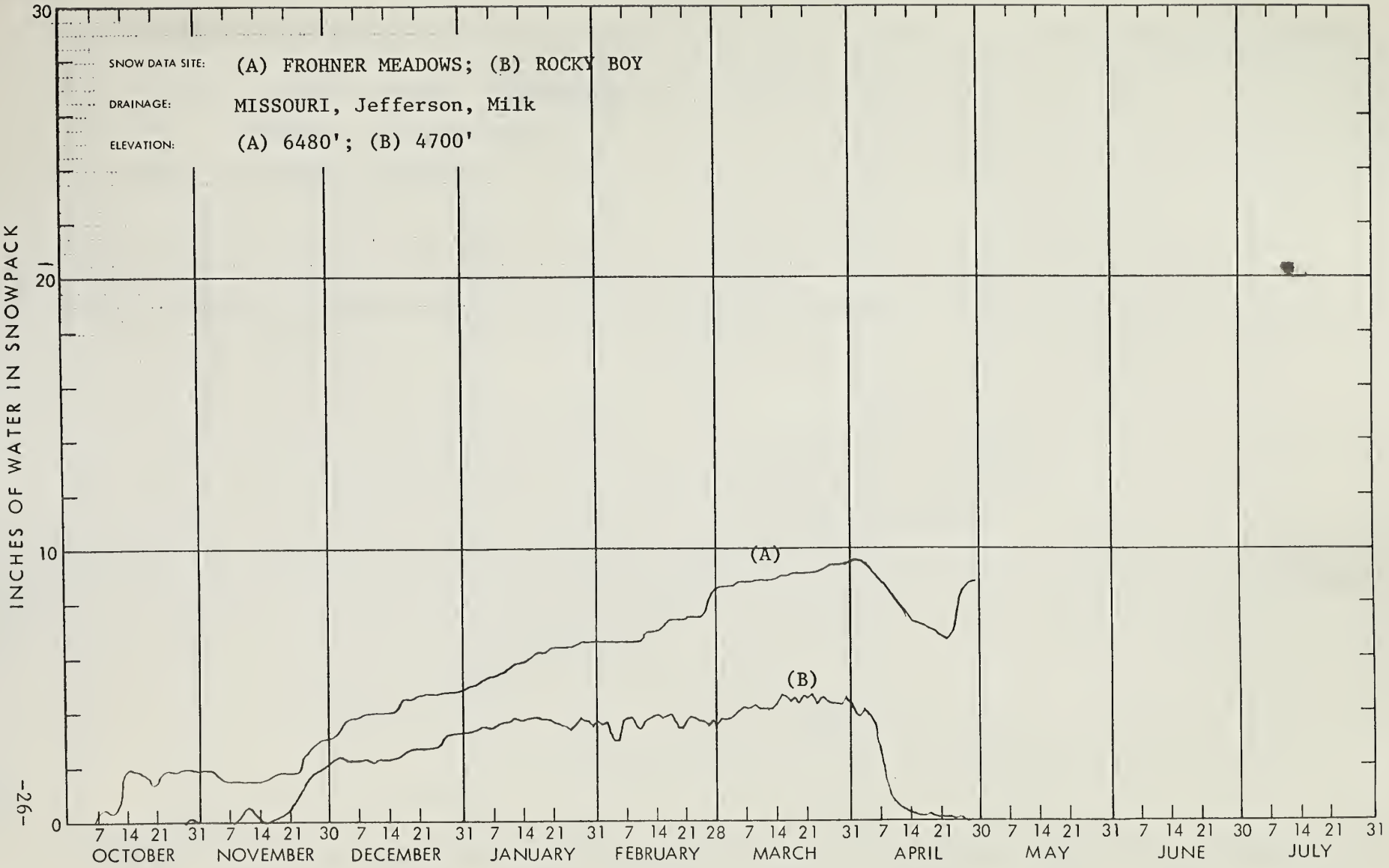
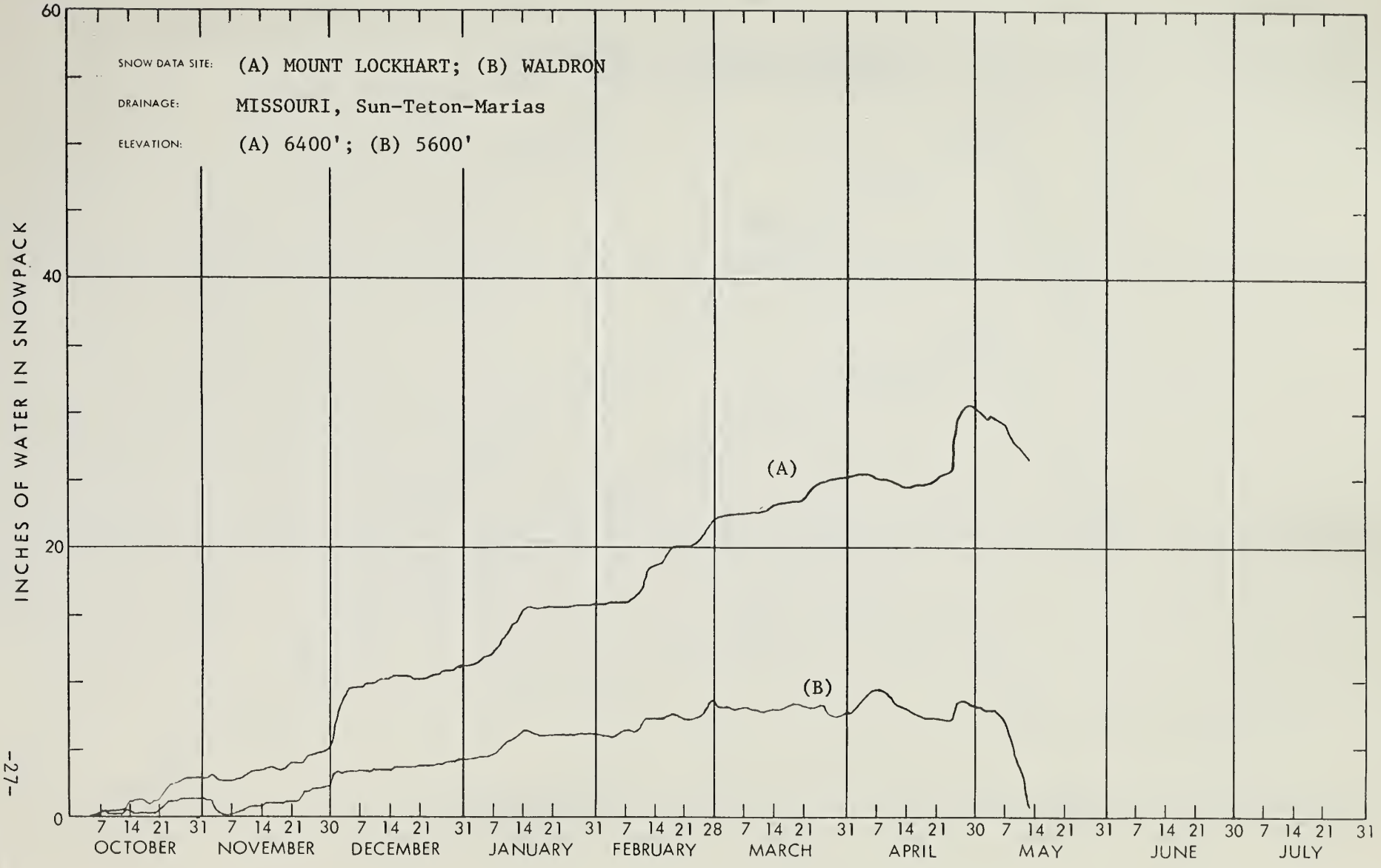

SNOW DATA SITE: (A) FROHNER MEADOWS; (B) ROCKY BOY
DRAINAGE: MISSOURI, Jefferson, Milk
ELEVATION: (A) 6480'; (B) 4700'
INCHES OF WATER IN SNOWPACK
30
20
10
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: (A) MOUNT LOCKHART; (B) WALDRON
DRAINAGE: MISSOURI, Sun-Teton-Marias
ELEVATION: (A) 6400'; (B) 5600'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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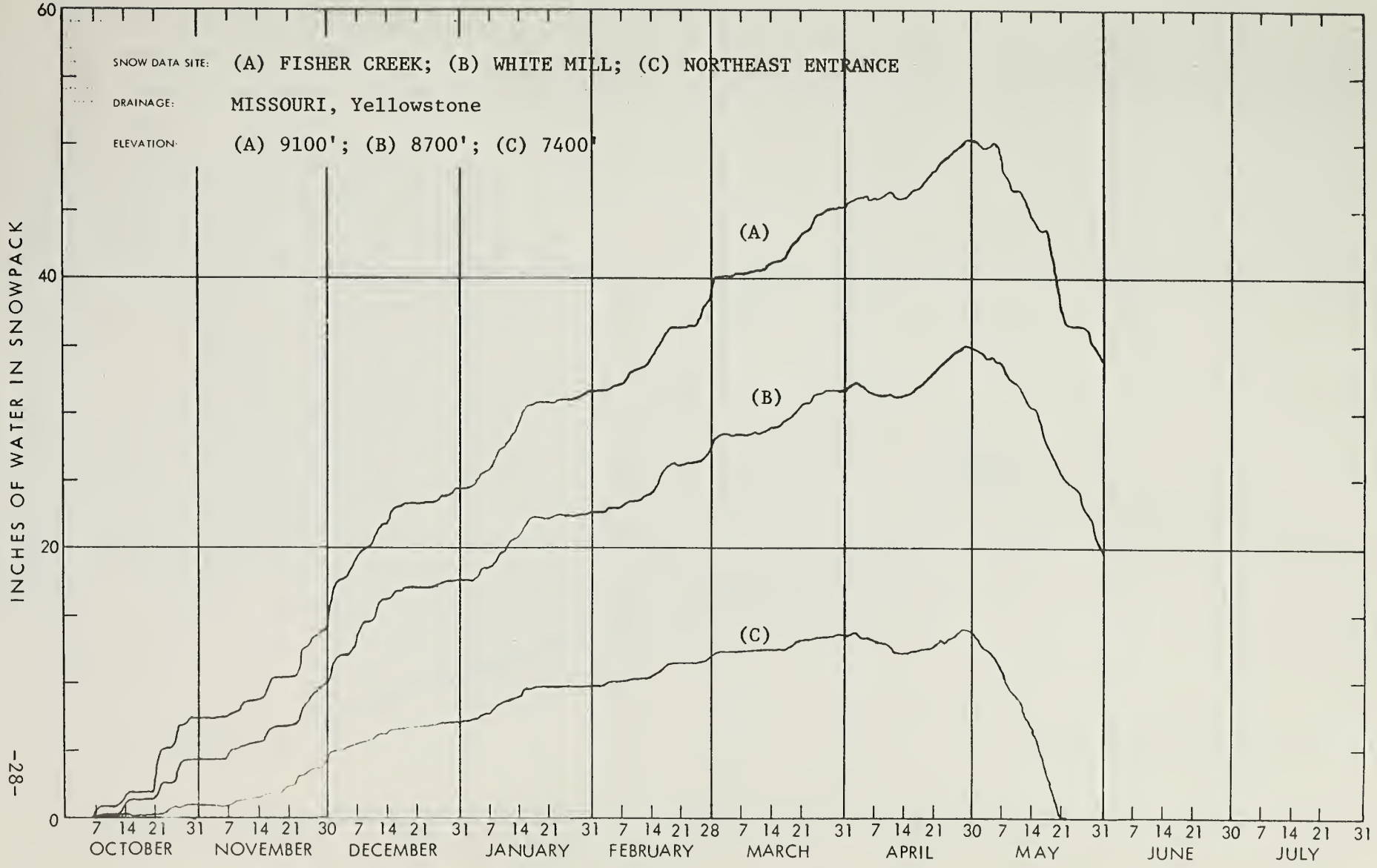
SNOW DATA SITE: (A) FISHER CREEK; (B) WHITE MILL; (C) NORTHEAST ENTRANCE
DRAINAGE: MISSOURI, Yellowstone
ELEVATION: (A) 9100'; (B) 8700'; (C) 7400'
INCHES OF WATER IN SNOWPACK
60
40
20
0
(A)
(B)
(C)
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
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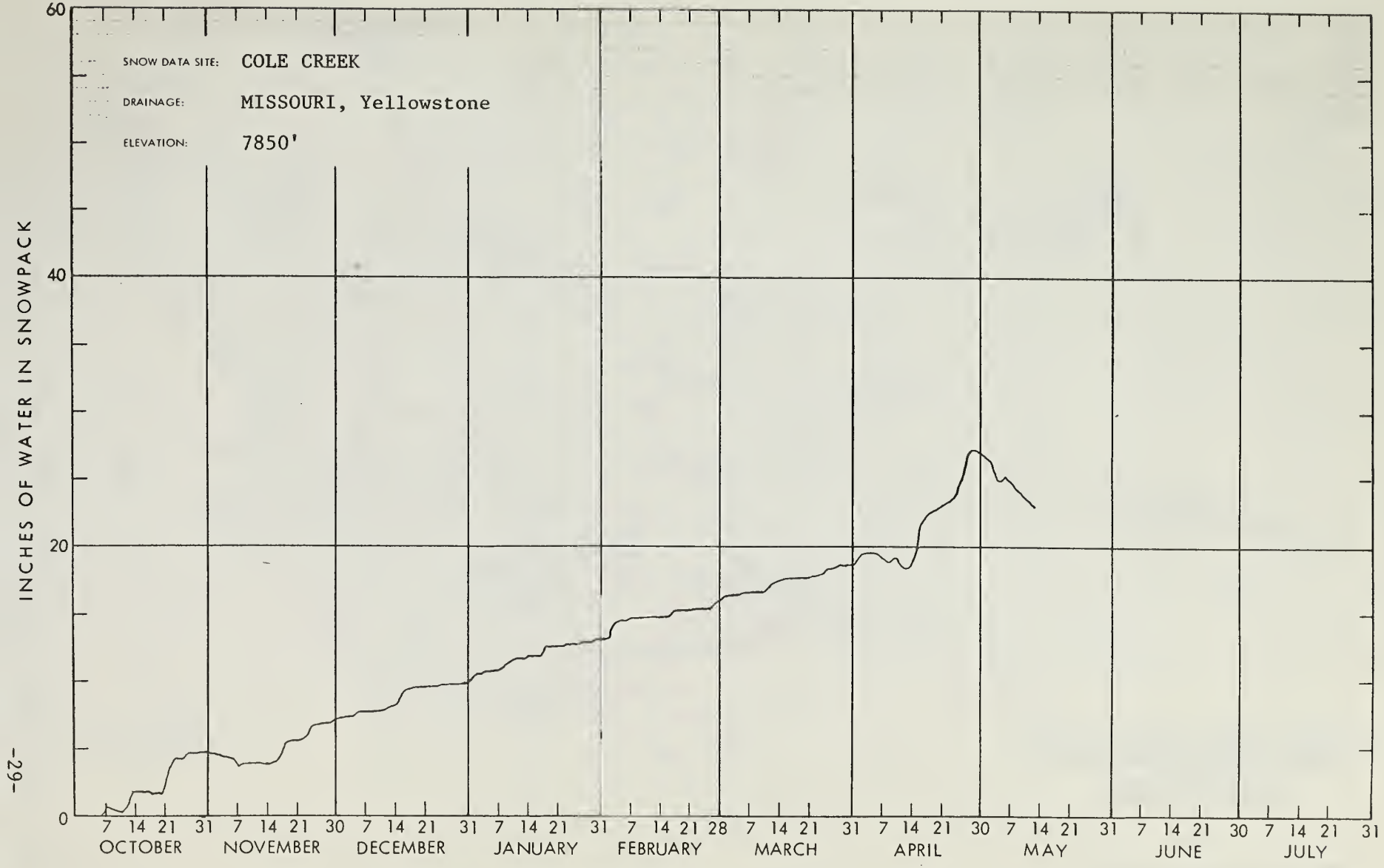
JULY


SNOW DATA SITE: COLE CREEK
DRAINAGE: MISSOURI, Yellowstone
ELEVATION: 7850'
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
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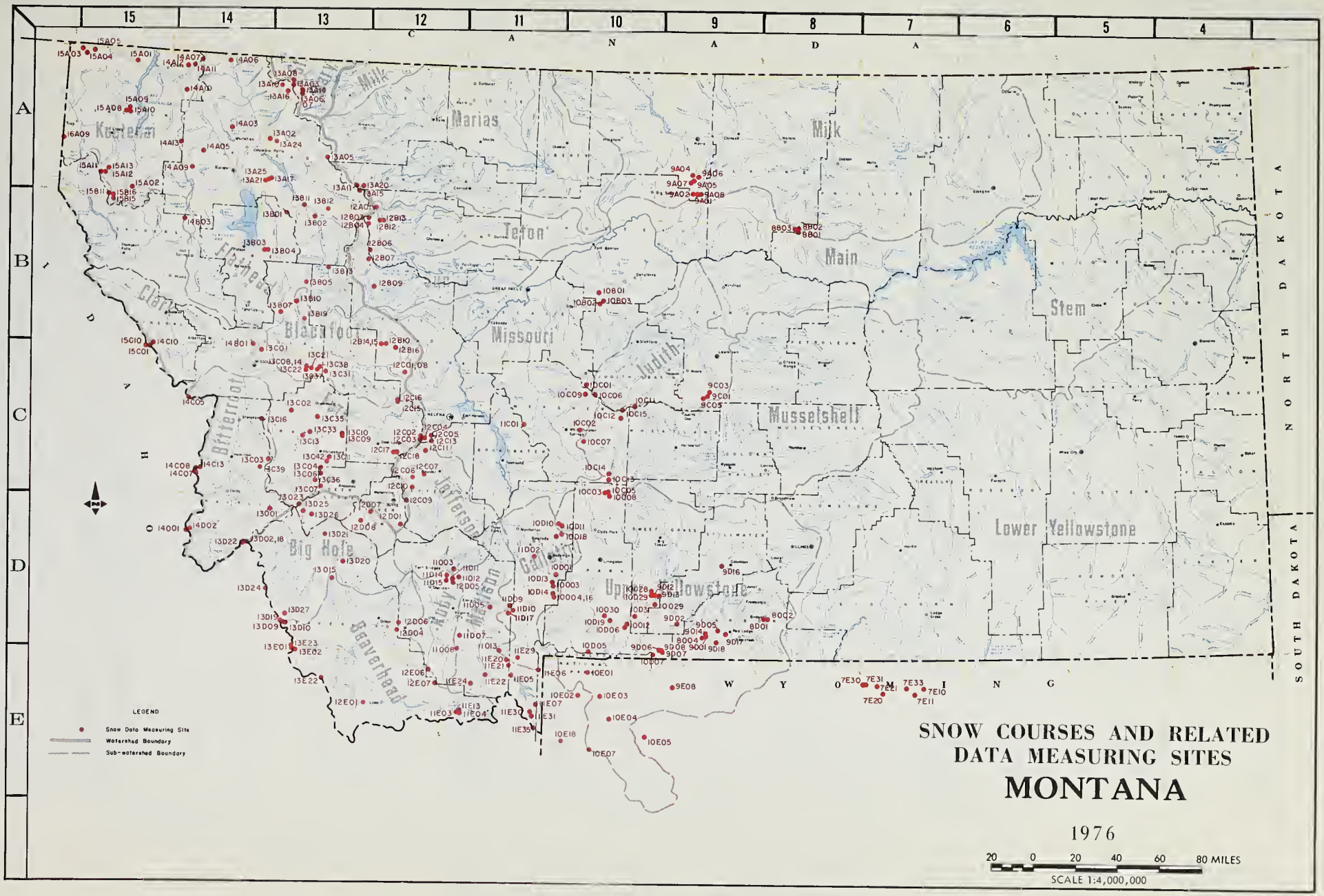
JULY



SNOW COURSES AND RELATED DATA MEASURING SITES

MONTANA

1976

20 0 20 40 60 80 MILES

SCALE 1:4,000,000

INDEX to MONTANA SNOW COURSES and DATA SITES

SNOW COURSES

COLUMBIA RIVER BASIN

KOOTENAI RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Bald Eagle Peak	15A11	5700	6	27N	31W		3,4,5,5½,6	1
Banfield Mountain	15A08	5600	4	32N	30W	S,P	2,3,4,5,5½,6	1
Barse Creek	15811	5500	36	26N	31W		3,4,5,5½	2
Barse Midway	15816	4600	31	26N	30W		3,4,5,5½	2
Barse Trail	15815	3800	5	25N	30W	M	3,4,5,5½	2
Brietow Creek	15A10	3900	2	32N	30W		2,3,4,5,5½,6	1
Brush Creek Timber	14A13	5000	12	30N	26W		3,4,5	1,2
Cedar Grove	15A13	4100	35	28N	31W		2,3,4,5,5½,6	1
Davis Creek	15A04	5600	20	37N	33W		2,3,4,5,5½,6	1
Carver Creek	15A05	4250	18	37N	32W	S,P	2,3,4,5,5½,6	1
Grave Creek	14A11	4300	1	36N	25W	S,P	3,4,5,5½,6	1
Hawkins Lake	15A03	6450	18	37N	33W	S,P	2,3,4,5,5½,6	1
Keeler Creek	16A09	3300	25	30N	35W		3,4,5	1
Lost Soul	15A09	4800	31	33N	29W		2,3,4,5,5½,6	1
Murphy Lake R. S.	14A10	3000	5	34N	25W	M,NSC	Monthly	2
Poorman Creek	15A12	5100	5	27N	31W	S,P	2,3,4,5,5½,6	1
Raven	15A02	3050	2	26N	29W	M,NSC	Monthly	2
Red Mountain	13A01	6000	4	36N	29W		3,4,5,5½,6	2
Stahl Peak	14A12	6050	5	36N	25W	S,P	3,4,5,5½,6	1
Weesel Divide	14A07	5450	20	37N	24W		3,4,5,5½,6	1

FLATHEAD RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Basoo Peak	14B03	5150	11	24N	25W		3,4,5	5
Beaver Lake	13A11	5900	31	28N	11W		3,4,5	1
Big Creek	13B03	6750	7	22N	18W		3,4,5, 6	1,5
Camp Misery	13A17	6400	30	28N	18W		3,4,5	1,2
Desert Mountain	13A02	5600	24	31N	19W	M	1,2,3,4,5, 6	1,2
Emery Creek	13A24	4350	20	31N	18W		3,4,5	1
Fatty Creek	13B04	5500	8	22N	18W		3,4,5, 6	1,5
Flattop Mountain	13A19	6300	12	35N	18W	S,P	4	1,6
Griffin Creek Divide	14A09	5150	11	28N	25W		3,4,5	5
Gunsight Lake	13812	6300	30	26N	13W		3,4,5	1
Hell Roaring Divide	14A03	5770	35	32N	22W		1,2,3,4,5,5½,6	2
Holbrook	13813	4530	18	21N	13W	A	1,2,3,4,5	1
Itshenehn	14A06	3890	14	37N	22W		3,4	6
Logan Creek	14A05	4300	34	30N	24W		3,4,5	1,2
Mineral Creek	13A16	4000	29	35N	17W		3,4,5	6
Noisy Basin	13A15	6040	25	28N	19W	S,P,M	3,4,5	1,2
Noisy Creek	13A21	3600	35	28N	19W		3,4,5	1,2
North Fork Jocko	13N07	6330	3	17N	17W		3,4,5,5½,6	1,5
Spotted Bear Mountain	13N02	7000	23	25N	15W	A	1,2,3,4,5	1
Trinkus Lake	13B01	6100	9	25N	17W		3,4,5	1
Twin Creeks	13811	3580	25	26N	16W	A	1,2,3,4,5	1
Upper Holland Lake	13B05	6200	28	20N	15W		3,4,5	1

CLARK FORK RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Black Pine	13C13	7100	26	8N	15W	S,P,M	1,2,3,4,5,5½,6	1
Combination	13C33	5600	7	8N	14W	S,P	1,2,3,4,5,5½,6	1
Copper Bottom	12816	5200	13	15N	8W	S,P	3,4,5	1,2
Copper Camp	12814	6950	3	15N	9W	S,P	3,4,5	1,2
Copper Creek	12810	5700	1	15N	9W		3,4,5	1,2
Copper Lake Creek	12815	6100	3	15N	9W		3,4,5	1,2
Cottonwood Creek	12C17	6400	14	7N	8W		3,4	2
Coyote Hill	13810	4200	12	18N	16W		1,2,3,4,5	1,2
Discovery Basin	13C42	7050	21	6N	13W		1,2,3,4,5,5½	1
Olx Mill	12C15	6400	24	11N	8W	P	1,2,3,4,5	11
El Dorado Mine	13C09	7800	23	8N	12W		3,4	1
Fred Burr Pass	13C11	8000	12	6N	13W		3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W		3,4	1
Heart Lake Trail	14C10	4800	11	14N	27W		1,2,3,4,5,5½,6	1
Hoodoo Basin	15C10	6000	17	14N	27W		1,2,3,4,5,5½,6	1
Hoodoo Creek	15C01	5900	16	14N	27W		1,2,3,4,5,5½,6	1
Intergard	13C04	6450	6	5N	13W		2,3,4,5	4
Lower Willow Creek	13C35	4740	3	9N	14W	P,NSC	Monthly	1
Lubrecht Forest	13C14	4100	11	13N	15W	M,NSC	Monthly	8
Lubrecht Flume	13C18	4680	13	13N	14W	S,P	1,2,3,4,5	8
Lubrecht Forest No. 3	13C21	5450	19	13N	14W		1,2,3,4,5	8
Lubrecht Forest No. 4	13C22	4650	23	13N	15W		1,2,3,4,5	8
Lubrecht Forest No. 6	13C08	4040	11	13N	15W		1,2,3,4,5	8
Lubrecht Hydrolpot	13C37	4200	22	13N	14W		1,2,3,4,5	8
North Fork Elk Creek	13C31	8250	20	13N	13W	S,P	1,2,3,4,5,5½,6	8
Ophir Face	12C16	7150	13	11N	8W		1,2,3,4,5	11
Petersen Meadows	13C36	7200	2	4N	14W	S,P	1,2,3,4,5	2
Seeley Lake R. S.	13819	4030	21	17N	15W	M,NSC	Monthly	2
Skalkaho Summit	13C03	7260	30	6N	17W	P,M	3,4,5,5½,6	1
Slide Rock Mountain	13C02	7100	35	10N	16W		3,4,5	1
Storm Lake	13C07	7780	19	6N	13W		1,2,3,4,5	2
Stuart Mill	13C06	8500	19	5N	13W		2,3,4	4
Stuart Mountain	13C01	7400	6	14N	18W		3,4,5,5½,6	8
Sugarloaf	12C18	7350	13	7N	8W		3,4	2
TV Mountain	14B01	6800	33	15N	19W		1,2,3,4,5,5½,6	8

BITTERROOT RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Ambrose	13C16	6480	28	9N	18W		3,4,5	1
Daly Creek	13C39	5780	16	5N	18W	P	3,4,5	1
East Fork R. S.	13B01	5400	16	2N	17W		3,4	1
Gibbons Pass	13B02	7100	4	2S	19W	M	1,2,3,4,5,5½,6	1,3
Lolo Pass	14C05	5250	11	10N	24W	M	1,2,3,4,5	1,2
Lost Horse	14C07	5940	5	4N	23W		3,4,5,5½,6	1
Nez Perce Camp	14002	5580	19	1S	23W		3,4,5	1
Nez Perce Pass	14001	6570	25	1S	24W		3,4,5	1
Saddle Mountain	13D22	7940	5	2S	19W	S,P	1,2,3,4,5,5½,6	1
Twelvemile Creek	14C13	5600	34	5N	23W	S,P	1,2,3,4,5,5½,6	1
Twin Lakes	14C08	6510	32	5N	23W	S,P	1,2,3,4,5,5½,8	1

HUDSON BAY BASIN

ST. MARY RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Iceberg Lake No. 3	13A03	5600	1	35N	17W		5	3,9
Josephine Lower No. 9	13A14	4900	22	35N	16W		5	3,9
Mount Allen No. 7	13A07	5700	27	35N	16W		5	3,9
Piegan Pass No. 6	13A06	5500	27	35N	16W		5	3,9
Ptarmigan No. 8	13A08	5800	36	36N	17W		5	3,9

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Bloody Dick	13D10	7600	12	8S	16W	S,P	3,4,5	1
Carter Creek	12004	7600	22	8S	7W		2,3,4	11
Christensen Ranch	12006	6000	34	7S	7W	P,NSC	Monthly	11
Dad Creek Lake	13F22	8400	24	12S	13W		3,4,5	1
Elk Horn Springs	13015	7800	21	4S	12W		3,4,5	3
Gold Stone	13D09	8100	11	8S	16W		3,4,5	1
Lakeview	11E13	6700	23	14S	2W	M,NSC	Monthly	10
Lakeview Canyon	11E04	6930	26	14S	2W		1,2,3,4,5	10
Lakeview Ridge	11E03	7400	27	14S	2W		1,2,3,4,5	10
Lemhi Pass	13E01	7480	9	10S	15W	S,P	3,4	1
Lemhi Ridge	13E23	8100	4	10S	15W	P	3,4	1
Trail Creek	13E02	7090	15	10S	15W		3,4	1
White Pine Ridge	12E01	8850	18	14S	9W		3,4,5	1

RUBY RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Branham Lakes	11D14	8850	5	4S	3W		3,4,5	1,12
Clover Meadow	11D08	8600	28	9S	2W		3,4,5	1
Divide	12E07	7800	14	12S	4W	S,P	3,4,5	1
Middle Mill Creek	11D15	7850	17	4S	3W		3,4,5	1,12
Notch	12E06	8500	18	11S	4W		3,4,5	1
Smuggler Mine	12005	6960	24	4S	4W		3,4,5	1,12

BIG HOLE RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Abundance Lake	13D20	8800	7	3S	11W		3,4,5	1
Bull Mountain	12D08	7500	3	1N	10W		1,2,3,4,5	2
Calvert Creek	13D26	6450	34	2N	14W	S,P	3,4,5	1
Darkhorse Lake	13D19	8600	4	8S	16W		3,4,5	1
Fleecer Ridge	12D07	6600	18	2N	9W		1,2,3,4,5	2
Foolhen	13D21	8280	11	1S	13W		3,4,5	1
Jahnke Lake Trail	13D27	7200	24	7S	16W		3,4,5	1
Mudd Lake	13D25	7650	24	2N	15W		3,4,5	1
Palisade Creek	13D23	8250	3	2N	15W		4,5	1
Sieg-A-Melt Lake	13D24	8750	29	5S	17W		3,4,5	1

JEFFERSON RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Berry Meadow	12C07	7000	8	5N	5W		3,4	1
Copper Mountain	12C09	7700	13	3N	7W		2,3,4,5,5½	4
Nez Perce Creek	12C10	6500	16	4N	6W		2,3,4,5	4
Picnic Creek	12C06	6500	21	5N	6W		2,3,4	4
Pipestone Pass	12D01	7200	10	1N	7W		1,2,3,4,5	4
Rocker Peak	12C11	8000	17	7N	5W	S,P	1,2,3,4,5	1

MADISON RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Black Bear	11E35	7950	27	15S	5E	S,P	1,2,3,4,5,5½,6	1,2
Cell Road	11D07	8050	21	8S	2W		3,4,5	1
Four Mile	11D12	6900	5	4S	2W	P	3,4,5	1
Hebgen Dam	11E05	6550	22	11S	3E		1,2,3,4,5	3
Jack Creek	11C05	7500	13	6S	1E		3,4	1
Lake Creek	11E22	6100	27	11S	1E		2,3,4,5	1,2
Lower Twin	11D11	7900	12	4S	3W		3,4,5	1
Madison Plateau	11E31	7750	28	14S	5E	S,P	1,2,3,4,5,5½,6	1,2
North Meadow	11D03	7500	24	3S	3W		3,4,5	1
Potomagetom Park	11E21	7150	33	10S	3E		3,4,5	2
Sentinel Creek	11E20	8300	17	10S	3E		3,4,5	2
Tepee Creek	11E24	8000	15	12S	1W	S,P	2,3,4,5	1,2
West Yellowstone	11E07	6700	34	13S	5E	M,S	1,2,3,4,5	1,3,6
Whiskey Creek	11E30	6800	19	14S	5E	S,P	1,2,3,4,5,5½,6	2

GALLATIN RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Arch Falls	10D14	7350	3	5S	6E		1,2,3,4,5,5½,6	1
Bear Basin	11D09	8150	9	6S	3E		3,4,5	1
Big Sky	11D17	7700	30	6S	3E	P	1,2,3,4,5	1
Bridger Bowl	10D13	7250	25	1N	6E	S,P,M	1,2,3,4,5,5½,6	1
Carrot Basin	11E29	9000	18	10S	4E	S	1,2,3,4,5	2
College Site	11D02	4856	18	2S	5E	M,NSC	Weekly	7
Davile Slide	10D04	8100	14	5S	6E		1,2,3,4,5,5½,6	1
Hood Meadow	10D03	6600	22	4S	6E		1,2,3,4,5,5½,6	1
Lick Creek	10D13	6860	10	4S	6E	S,P,M	1,2,3,4,5,5½,6	1
Little Park	11D10	7400	22	6S	3E		3,4,5	1
Maynard Creek	10D18	6210	19	1N	7E	S,P	1,2,3,4,5,5½,6	1
New World	10D01	6700	24	3S	6E		2,3,4	1
Shower Falls	10D16	8100	14	5S	6E	S,P	1,2,3,4,5,5½,6	1
Taylor Peake	11D13	8500	26	9S	2E	S,P	4	1
Twenty-One Mile	11E06	7150	1	11S	5E	M	1,2,3,4,5	3

MISSOURI RIVER MAIN STEM

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Big Coulee	10B03	5100	10	19N	9E		1,2,3,4,5	1,12
Bowlder Mountain	11C01	7950	1	9N	3E		3,4,5	1
Cheesman Reservoir	12C05	6200	2	8N	5W		1,2,3,4,5	3
Deadman Creek	10C09	6450	23	12N	8E	S,P	1,2,3,4,5,5½,6	1
Elk Peak	10C07	8000	10	8N	8E		3,4,5	1
Frohner Meadows	12C13	6480	23	8N	5W	S,P	1,2,3,4,5	1
Grasshopper	10C02	7000	19	9N	8E		3,4,5	1
Highwood Divide	10B02	5650	16	19N	9E	P	1,2,3,4,5	1,12
Highwood Station	10B01	4600	20	20N	9E	P	1,2,3,4,5	1,12
Kings Hill	10C01	7500	34	13N	8E	M	3,4,5,5½,6	1,3
Steeple Pass	12C01	8600	16	13N	7W	M	3,4,5	1,3
Ten Mile Lower	12C02	8600	12	8N	6W		1,2,3,4,5	3
Ten Mile Middle	12C03	8400	13	8N	6W		1,2,3,4,5	3
Ten Mile Upper	12C04	8000	19	8N	5W		1,2,3,4,5	3

TETON - MARIAS RIVERS

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Badger Pass	13A15	6900	4	27N	11W	A	1,2,3,4,5	1
Blue Lake	13A20	5900	25	28N	11W	A	1,2,3,4,5	1
Cabin Creek	12D06	5200	33	23N	10W		3,4,5	2
Five-Bull	12B09	5700	25	20N	10W		3,4,5	1
Freight Creek	12A01	6000	13	26N	10W		3,4,5	1
Goat Mountain	12D07	7000	20	22N	10W		3,4	2,3
Marias Pass	13A05	5250	31	30N	13W	M	1,2,3,4,5	3,6
Mount Lockhart	12B12	6400	18	25N	9W	S,P	1,2,3,4,5,5½,6	2
Waldron	12B13	5600	17	25N	9W	S,P	1,2,3,4,5,5½,6	2
Wrong Creek	12B04	5700	32	25N	10W		3,4,5	2
Wrong Ridge	12B03	6800	17	25N	10W		3,4,5	2

JUDITH RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Big Snowy	9C05	7150	25	12N	17E		3,4,5	1
Crystal Lake	9C01	6100	19	12N	18E		3,4,5	1
Rock Creek	9C03	5600	7	12N	18E		3,4,5	1
Spur Park	10C06	8100	20	12N	9E	S,P	1,2,3,4,5,5½,6	1
Wilcox Ranch	9C06	5300	17	13N	18E	P,NSC	Monthly	11

MUSSELSHELL RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Daisy Peak	10C13	7600	34	11N	11E		3,4,5	2
Foglo Creek	10C13	7000	2	5N	10E		3,4,5	2
Forest Lake	10C14	6600	26	6N	10E		3,4,5	2
Haymaker	10C11	8050	16	11N	12E		3,4,5	2
Johnson Park	10C12	6450	16	10N	11E		3,4,5	2

MILK RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Beaver Creek	9A05	3950	21	29N	16E	M,NSC	Monthly	1,7
Bear Paw Ski Area	9A02	5200	21	28N	16E	P	1,2,3,4,5	1,7
Bowlder Creek	9A08	5100	24	28N	16E	P	1,2,3,4,5	1,7
King Creek Saddle	8B02	4550	10	25N	24E		1,2,3,4,5	5
King Springs	8B03	4150	9	25N	24E		1,2,3,4,5	5
Kiwanis Camp	9A04	3720	9	29N	16E	P,W,T	1,2,3,4,5	1,7
Missian Mountain	8B01	5050	15	25N	24E	P	1,2,3,4,5	5
Rocky Boy	9A01	4700	22	28N	16E	S,P,M	1,2,3,4,5	1,7
Sucker Creek	9A06	3960	11	29N	16E	P	1,2,3,4,5	1,7
Taylor Road	9A07	4080	19	29N	16E	P	1,2,3,4,5	1,7

UPPER YELLOWSTONE RIVER

Drainage Basin & Snow Course	Number	Elev.	Sec.	Twp.	Range	Sensors in Addition to Snow Courses 1/	Measuring Dates 2/	Meas. By 3/
Bald Ridge	10C05	7500	11	4N	10E		3,4,5	1
Battle Ridge	10D11	6020	32	2N	7E	M	1,2,3,4,5	1
Bote Soto	9D14	7750	35	7S	18E		3,4,5	1
Box Canyon	10D31	6700	28	6S	12E		3,4,5	1
Brose Monkey	10D29	9050	6	5S	14E	P,NSC	Seasonally	11
Comp Senia	9001	7890	2	8S	18E		3,4,5,5½,6	1
Cole Creek	9D16	7850	26	2S	19E	S,P	1,2,3,4,5,5½,6	1,2
Colley Creek	10D30	6300	34	6S	10E		3,4,5	1
Cooke Station	9D07	8150	19	9S	13E		1,2,3,4,5,5½,6	1,2
Crevice Mountain	10D05	8400	22	9S	9E		3,4	2
Fisher Creek	9D06	9100	11	9S	14E	S,P	1,2,3,4,5,5½,6	1,2
Grizzly Peak	9D05	8400	26	7S	19E		1,2,3,4,5	1,2
Independence	10D06	7850	21	7S	12E		3,4,5	1
Mill Creek	10D19	7500	6	7S	11E	P	3,4,5	2
Monument Peak	10D12	8800	16	7S	12E		3,4,5	1
Northeast Entrance	10D07	7400	33	9S	14E	S,P,M	1,2,3,4,5,5½,6	1,6
Picket Pin Lower	9D13	6200	1	5S	14E	P	1,2,3,4,5	13
Picket Pin Middle	9D12	7250	3	5S	14E		1,2,3,4,5	13
Picket Pin Upper	10D28	8100	32	4S	14E	P	1,2,3,4,5	13
PMC Dryland	8B02	3700	35	6S	23E	M,NSC	Monthly	1
PMC Headquarters	8B01	3656	34	6S	23E	P,W,T,NSC	Daily	1
Porcupine	10C03	6500	10	4N	10E	S,P	3,4,5	1
Sacajowea	10D10	6550	36	2N	6E		3,4,5	1
Silver Run	9D18	6630	11	8S	19E	S,P	3,4,5	1
South Fork Shields	10C08	8100	13	4N	10E		3,4,5	1
Timberline Creek	9D04	8850	10	8S	18E		3,4,5,5½,8	1
West Rosebud	9D02	7500	9	7S	16E		3,4	4
White Mill	9D08	8700	18	9S	15E	S,P	3,4,5,5½,6	1,2
Willow Creek	9D17	6500	31	7S	20E		1,2,3,4,5	1,2

LEGEND

1/ Blank refers to snow course only at site
S = snow pillow also
P = precipitation gage also
M = soil moisture gage also
T = max-min temperature also
W = wind run also
A = aerial marker also
NSC = no snow course at site

2/ Numerals 1,2,3,4,5,5½,6 refer to snow course or aerial marker measurements on January 1, February 1, March 1, April 1, May 1, May 15, and June 1. Most snow pillows, temperature, and wind run are daily readings, most precipitation gages and soil moisture are read monthly.

3/ Numerals refer to agency making the snow surveys as follows:

1. Soil Conservation Service
2. Forest Service
3. Geological Survey
4. Montana Power Company
5. Bureau of Indian Affairs
6. National Park Service
7. MSU Agricultural Experiment Station
8. University of Montana School of Forestry
9. Department of Energy, Mines and Resources
10. Bureau of Sports Fisheries and Wildlife
11. Private Cooperator
12. Montana Association of Conservation Districts
13. Montana Department of Fish and Game

Agencies and Organizations Cooperating in Montana Snow Surveys

GOVERNMENT AGENCIES

Canada:

Water Survey of Canada, Calgary, Department of the Environment
Water Resources Service, Department of Lands, Forests and Water Resources, British Columbia

Federal:

Department of the Army
    Corps of Engineers
U.S. Department of Agriculture
    Forest Service
    Soil Conservation Service
U.S. Department of Commerce
    NOAA, National Weather Service
U.S. Department of the Interior
    Bonneville Power Administration
    Bureau of Indian Affairs
    Bureau of Reclamation
    Fish and Wildlife Service
    Geological Survey
    National Park Service

STATE

Montana Association of Conservation Districts
Montana Department of Fish and Game
Montana Department of Natural Resources and Conservation
Montana State University - Agricultural Experiment Station
University of Montana - School of Forestry

PRIVATE

Montana Power Company

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
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